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Table of Contents.

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ORIGINAL ARTICLES—	Page.	CORRESPONDENCE—Continued.	Page.
An Address—People in Hospital, by Felix Arden ..	549	Electro-Convulsive Therapy ..	587
Notes on Argemone (Carcinoid) Tumours: Three		The Upsurge of the Savage ..	587
Examples in Childhood, by Reginald Webster		Vertebral Disk Lesions ..	588
and Alan Williams ..	553	The Training of Surgeons ..	588
Mitral Valvotomy for Mitral Stenosis: An Analysis		The Teaching of Anatomy ..	588
of 104 Cases from This Viewpoint, by George V.		The Use of Reserpine, Chlorpromazine and Allied	
Hall and Harry M. Windsor ..	558	Drugs in Medicine and Psychiatry ..	589
REPORTS OF CASES—		POST-GRADUATE WORK—	
Antibiotic-Attenuated Chronic Staphylococcal		The Post-Graduate Committee in Medicine in the	
Abscess Simulating Early Carcinoma in the		University of Sydney ..	589
Lactating Breast, by Thomas F. Rose ..	567	Services Canteens Trust Fund: Post-Graduate	
REVIEWS—		Scholarships ..	589
The Year Book of Pathology and Clinical Pathology	568	MEDICAL PRIZES—	
Current Therapy, 1956 ..	568	The Evan Jones Prize ..	590
The Treatment of Renal Failure ..	568	The E. H. Molesworth Prize ..	590
Ten Patients and an Almoner ..	569	NAVAL, MILITARY AND AIR FORCE—	
A Handbook of Medical Hypnosis ..	569	Appointments ..	590
Progress in Clinical Obstetrics and Gynaecology ..	569	DISEASES NOTIFIED IN EACH STATE AND TERRI-	
A Manual of Obstetrics ..	570	TORY OF AUSTRALIA ..	591
Chest X-Ray Diagnosis ..	570	AUSTRALIAN MEDICAL BOARD PROCEEDINGS—	
BOOKS RECEIVED ..	570	Queensland ..	591
LEADING ARTICLES—		Tasmania ..	592
Confinements at Home and Abroad ..	571	THE COLLEGE OF RADIOLOGISTS OF	
CURRENT COMMENT—		AUSTRALASIA—	
Recurrent Varicose Veins ..	572	Examination Results ..	592
Chopin ..	573	UNIVERSITY INTELLIGENCE—	
Normal Pregnancy and Body Composition ..	574	The University of Sydney ..	592
Chronic Anaemia and the Circulatory System ..	574	CONGRESSES—	
Thoughts on "Orphan" Viruses ..	575	International Congress of Otolaryngology ..	592
ABSTRACTS FROM MEDICAL LITERATURE—		NOMINATIONS AND ELECTIONS ..	592
Obstetrics and Gynaecology ..	576	DEATHS ..	592
BRITISH MEDICAL ASSOCIATION NEWS—		DIARY FOR THE MONTH ..	592
Annual Meeting ..	578	MEDICAL APPOINTMENTS: IMPORTANT NOTICE ..	592
OUT OF THE PAST ..	586	EDITORIAL NOTICES ..	592
CORRESPONDENCE—			
The Medical Benefits Fund of Australia ..	587		
Sternal Puncture: Its Indications and Limitations ..	587		

An Address.¹

PEOPLE IN HOSPITAL.

By FELIX ARDEN,
Brisbane.

It is an honour to address you tonight as incoming President of the Queensland Branch of the British Medical Association. I want to thank those of my colleagues who have elected me to this high office. Dr. Alan Lee, the retiring President, can be assured that I will be leaning very heavily on his great wisdom and experience for the next twelve months. I want also to pledge myself for the coming year to support wholeheartedly the honour and interests of our Association, bearing in mind that such a pledge necessarily includes the community which all of us, as doctors, try to serve.

It may be appropriate then, to speak of hospitals, which concern us all. Accept them for tonight, not as structures in brick and steel, but as places where groups of people meet. Think of the patients and their relatives, some hopeful, some despondent, mostly inarticulate, and then of the army of people who care for them—nurses, doctors, tech-

nicians, physiotherapists, laboratory staff, clerks, cooks and all the rest. For in the complex medicine of today no one group is sufficient. We have come far from the small temple groves of ancient Greece, where the white-robed priest-physician single-handed soothed his patients while Nature worked her cures.

We have come far, and never faster than in the last fifty years. Many diseases that for centuries emptied the cradles and carried off young men and women have been brought under control. And more will come. But medicine is a continuous struggle against any threat to the health and happiness of mankind. We have reached the age of personality disorders, springing, no doubt, from the anxieties, tensions and insecurities of the civilization we have built up. Not a few of our patients are sick in their bodies because they are troubled in their minds. And our hospitals are changing in various ways to meet the new threat.

A few years ago a remarkable film was made showing the reactions of a two-year-old child taken to hospital for the first time, separated from parents, stripped, bathed, given an injection and submitted to an operation. It illustrated, better than words could have done, what a sense of insecurity these comparatively simple procedures produced. It is a healthy sign that physicians, who were in the past solely concerned with treating physical illness, are now devoting time to the emotional welfare of their patients.

¹ Delivered at the annual meeting of the Queensland Branch of the British Medical Association on August 25, 1956.

In a recent study conducted in Stockholm by the World Health Organization, specialists discussed what could be done to prevent psychological damage to the child going into the strange new environment of a hospital, and how he could be made to feel secure. Reading this report, one cannot help being struck by the atmosphere of kindness and imagination that pervades it. Listen to this:

Bath, hospital clothes and to bed used to be the routine and no doubt still is in a good many hospitals. But to the small child these apparently minor physical details may mean cutting him off from his former life and self. If he wants to smell as he used to, let him. He should be encouraged to bring a familiar toy, even a sleeping rag, with him. His nurse (note: not just any nurse) should be prepared to receive him, and whenever possible should know beforehand a few details of his family background to make some conversation with him.

The Stockholm group took it for granted that daily visits should be the rule. The sting of the mother's departure could largely be taken out by making the visit an everyday occurrence on which the children came to rely. With a little encouragement from the nursing staff, it was found that most mothers fitted easily into the hospital scene, gave the nurses a hand and busied themselves with details.

It seems that parents are gradually being accepted by children's hospitals as reasonable and useful human beings. For too long they have been hustled out of the ward as soon as possible, allowed to visit only at brief fixed periods, and obliged to make a separate trip to hospital to interview resident medical officers, who are not available at visiting hours. If they telephone for information about their child's progress, they are apt to be dismissed with the fatuous statement that he has had a comfortable night.

One of the sessions at the Australasian Medical Congress (British Medical Association) last year was devoted to a discussion of unrestricted visiting in children's hospitals. We listened to a senior sister from a large southern hospital where parents receive the following printed notice:

You, the parents, and we in the hospital are working together to make your child well. We believe it is good for the child that you visit whenever you desire. You will see all that is done for the patient. If there is anything you wish to criticize, or if you have any suggestions for improvement, please speak to the Sister in charge of the Ward. We welcome such suggestions.

This is no impractical scheme. The sister in question remarked that after several years' experience she would never again choose to work in a hospital in which free visiting was not allowed. Not only does the mother's presence keep the children happier; it helps to bridge the gap between the hospital treatment and the home care that is to follow. Moreover, the nurse's work is lifted to a higher plane. She spends more time advising parents while relieved from some of the routine chores. I hope that one day we shall have the courage and good sense to put this scheme on trial here.

One could go further and ask whether some of the children who overcrowd hospital wards need be there at all. It is well known that they stand separation from home and parents badly. Yet many have come in because their parents could not afford to have a doctor visiting, or provide the necessary nursing care. Numbers of our in-patient children could ride out their illnesses just as safely and far more happily at home if they could receive some degree of nursing help, occasional medical visitation and a few minor investigations. Many others could with similar safeguards be discharged from hospital much sooner than they are.

The suggestion that the mantle of the hospitals' responsibility be extended to cover people in their own homes is not entirely new. Some experiments have already been made. Birmingham has just completed the first year's working of a small-scale plan. Only two nurses and no doctors were engaged, but during the year over 450 children were attended in their homes and over 3000 visits were made. In many instances admission to hospital was avoided entirely.

The provision of home care is even more important for the elderly—not just as an attempt to dispose of "chronics" who are filling hospital beds, but to place these good souls in an atmosphere which would help them back to health and usefulness. Credit goes to the Montefiore Hospital, New York, for putting a plan into operation nine years ago. It was not to be an elaborate home-nursing service, but a real attempt to make as much of the hospital as was mobile available to the patient in his own home. The success of this scheme is now world-renowned. Visits by one of the medical staff are made once or twice a week, and the patient knows that the doctor is always available in an emergency. The nurse visits daily at first and then less often as she succeeds in teaching a member of the family how to manage. The social worker fixes any problems in her sphere, and a housekeeper service provides help for an hour or two a day when necessary. Many patients, who it seemed would never leave their beds in the hospital, have been able after treatment under the home care plan to lead useful and happy lives again.

A less ambitious scheme was started recently at the Royal Newcastle Hospital, New South Wales. This hospital, through its district nurses, maintains what is in effect an extramural ward of about 28 patients. They are visited up to three times a day if necessary, though most of them need much less attention than this. Resident medical officers do not participate in this scheme. It does not compete with private medical practice, as a patient is discharged to domiciliary care only after his own doctor, if he has one, has been consulted. The hospital authorities are very pleased with the scheme, the chief result of which is that 28 long-term patients are now outside the hospital and are very much happier in their own homes. The almoners play a great part and arrange the supply of hospital beds or other equipment for those who need them. A weekly staff meeting is held, presided over by one of the hospital physicians, to discuss problems as they arise.

But there is an even stronger argument for such domiciliary schemes. Present-day hospital costs, for both construction and maintenance, have become fantastic. A Canberra publication reveals that some recent hospital projects in Australia have cost between £5000 and £10,000 per bed, while from Britain it is reported that the average maintenance bill for teaching hospitals in London for the year 1954-1955 was £25 6s. per in-patient per week. Set against these figures is the calculation of the Montefiore and Newcastle authorities that the cost of keeping the patient in his bed at home is between one-quarter and one-sixth of the cost of keeping him within the hospital. It sounds as though, on financial as well as on humanitarian grounds, these home-nursing projects can be warmly advocated.

However, our concern tonight is for people in hospital, and I would speak of another practice becoming evident in the maternity sections. It is that known for want of a better title as "rooming-in"—briefly, a move to put the newborn baby back where he belongs, right alongside his mother, not in a community nursery down the passage.

Bear in mind that when women first began having their babies in hospital they were usually suffering some complication of pregnancy or childbirth. It was reasonable to keep the babies elsewhere. But the practice grew, and though most mothers are now healthy, an unnatural quiet still reigns in the maternity wards. Away in the nursery are the babies, neatly arranged in rows. They appear at regular intervals on a trolley, still arranged in rows, for strictly timed periods of breast feeding, after which they are weighed with precision and, if necessary returned to the breast for a specified number of extra minutes. Nappies are changed every three hours; visitors see them at ten minutes to eight. Everything in fact goes like clockwork—except that we have forgotten that babies are not machines. For the infant who wets his nappy just after it has been changed, for the hungry fellow who wants more frequent feeds and for the newborn who simply wants to be cuddled, this rigid system has no answer.

It took imaginative pediatricians such as Aldrich, with his book "Babies are Human Beings", and Spence, who

wrote of "Loneliness in Infancy", to restore our sense of balance. Statistics helped, such as those published in Dublin a few years ago, where the hospital with the lowest neonatal mortality rate was one where the babies were kept, not alongside their mothers, but right in bed with them. Inquiries revealed that mothers also, far from being worried by the infant's "bawling all night", were more troubled when they heard one crying unattended in the nursery, each convinced that it was her own and in distress. It seems that mothers need their babies emotionally: having suffered for them, they want the joy and pride of handling them and seeing them close by. They want to be able to pick them up and become acquainted. They want to deal with them when they are hungry, lonely or wet.

So far from babies beside the mother's bed being exposed to infection, it has been found that the real danger exists in the passage of bacteria from one baby to another when they lie close together in the nurseries. Last November the National Health and Medical Research Council, alarmed about this, asked that study should be directed into "rooming-in" as a means of controlling staphylococcal and other infections of the newborn. In England also, the Ministry of Health asked hospital boards to review their present practice and, where possible, to arrange that the infant should remain in the ward with the mother.

So "rooming-in", the natural practice of keeping the baby beside his mother, is slowly coming in—opposed, as you might expect, by the timid, the conservatives and the "over forty-fives". It is undoubtedly a move towards a more natural and a more imaginative hospital practice.

There is a popular demand today for a much larger proportion of intermediate beds in government hospitals, and it repeatedly happens that patients are obliged to seek treatment in public wards because no intermediate accommodation is available. This is particularly noticeable at the Brisbane Children's Hospital, where there are no intermediate beds at all, and at the Brisbane General Hospital, where there are relatively few. In contrast there is no such problems at the Brisbane Women's Hospital; intermediate beds are plentiful, and were selected last year for their confinements by 7900 women, compared with just over 5000 who took beds in the public wards.

The patient who pays for his hospital bed in Queensland—where public treatment is free—does so because he feels that the privileges are worth the money. There is the factor of social prestige, quite a real and deep-rooted feeling and entitled to respect. He also purchases greater comfort, more privacy, more frequent visitors and freedom from the attention of medical students. Most important of all, he acquires the right of being treated by the doctor of his choice.

The Council of the Queensland Branch of the British Medical Association has on various occasions and without much success urged that sufficient and suitable intermediate accommodation should be made available in all public hospitals. The curious situation is that people want intermediate beds for the reasons stated; doctors want them so that they can continue to treat their own patients; hospital boards ought to want them as they are revenue-producing; yet not enough are provided.

The practice of hospital authorities in the United States of America and Canada has been much more realistic. There they tend to add to their public hospitals sufficient private accommodation to meet the requirements of the clinicians who serve the hospital in the public wards, so that the entire institutional practice of the staff can be carried on at a single place in the interests of both rich and poor alike.

Hospital insurance is now giving vast numbers of people the capacity to pay. Dr. Louis Bauer stated last year that about two-thirds of the entire population of the United States of America now carried insurance which usually met the whole cost of intermediate accommodation for certain periods. In Australia the same process is in action. It can be predicted that there will be steady pressure by the community for the type of accommodation which it wants and for which it can afford to pay.

It might also be asked whether hospital boards pay enough attention to public relations. I submit that they do not.

On the whole our hospitals get a bad Press. It is not always undeserved, and sometimes such publicity proves a spur to action. But there is another side to the hospital story, a good, encouraging side, full of human interest. Yet how seldom do we hear about it! If a dramatic operation is performed, a new treatment instituted or a life-saving manoeuvre accomplished, we read it as a news item from another State or another country, even though the same things are happening here. Do we help to build up confidence in our hospitals by telling the papers our good news?

A great American hospital administrator, Goldwater, laid down this maxim:

First, strive to be efficient; resolve to be humane; and then communicate to the public in a dignified and ethical manner the story of your ideals, your resources, your methods, your results.

Some hospitals overseas resort to systematic publicity to create goodwill. Others discover the reactions of their patients, by seeking from them a frank statement of the things that have pleased or upset them during their hospital stay. It is the discharged patient who makes the reputation of the hospital, one way or the other.

Business men consider this technique essential. If one has something good to sell, tell the world about it; if not, find out from the customers—in this case the patients—where one is failing them. If our hospital authorities sought the opinions of their patients more often, they would discover many things—some good, some bad, but all valuable. People generally know what they want, and as they are indirectly paying for their hospitals their wishes are entitled to consideration.

Such an attitude on the part of boards of management would help to avoid the present sorry spectacle of complaining letters in the daily Press—letters which are usually followed by a flat denial from the hospital authorities and leave the public uneasy and critical.

Much wiser was the small country town which recently conceived a "hospital open day". People were invited to visit the hospital. They were welcomed, and conducted through every department, even the operating theatre. Demonstrations were presented, questions were answered, and four new nurses were enrolled. Through collections and other sources the hospital raised £500 during the day and gained goodwill and support beyond price.

Side by side with their unending task of caring for the sick, larger hospitals have two further duties: to be constantly engaged in research and in teaching.

About research I have nothing to say tonight except that it has a sort of quickening influence wherever it is going on. There is something exciting to medical students about the feeling that here, in this set of buildings, the frontiers of medical knowledge are being advanced, that their hospital is being put (in the eyes of the medical world) on the map. It is a feeling that anyone who has studied in such a hospital will understand; and it is impossible to explain to those who have not.

We all understand teaching and the need for it, especially for our medical students and probationer nurses. Less well appreciated is the need of all doctors—no matter how brilliant in their student days—for regular post-graduate instruction throughout their working lives. In fulfilling this need the teaching hospitals can play a major part.

Most general practitioners feel keenly that they should in some way have access to the practice of the metropolitan hospitals from which they are now cut off. This feeling finds expression now and then in such resolutions as one passed last October by the Council of the Queensland Branch:

That the principle be urged that access to the practice of public hospitals be allowed to all practitioners under the supervision of the consultant in charge of the case.

While there would be insuperable difficulties in the way of letting any doctor, other than a member of the staff, institute treatment, perform operations or give orders to resident medical officers, the principle is sound.

There are various ways in which the family physician can be brought into the hospital service. One is to see that he receives, not a short formal note from the resident medical officer, but a comprehensive letter from the consultant, when a former patient of his is being discharged from the hospital and returning to his care. If the facilities were provided, these letters could be dictated on the ward rounds by the consultant in the presence of his students. They would provide, not only an educational account of the illness and proposed future care, but an illustration of the link that should always exist between consultant and family doctor.

Another way would be the creation of short-term clinical assistant appointments at a nominal salary. These would give the holders, in return for their help in the out-patient clinics, useful experience in new methods, opportunities for discussion with other members of the hospital staff and the privilege of attending ward rounds and operations. It is likely that these appointments would be popular.

Another way of bringing the family physician into the service, of the hospital would be to invite him to attend bedside conferences when one of his former patients was concerned. As the one to whom the sick person first came, and as knowing the family background, he would often have something useful to contribute as well as to learn.

It should be easier for general practitioners in country towns to be connected in some way with the practice of their local hospitals, but they are often still excluded. There are still towns in which the "closed" hospital system prevails, to the disadvantage of everyone. Under this system it is assumed that the local medical superintendent and his staff of juniors can deal capably with all manner of diseases and injuries, without calling upon the other doctors in the town, however experienced they may be. If a patient does not pay private fees, he does not obtain their services. It is a system that operates unjustly all round. Not only does it affect public patients in the way just indicated, but it reduces the efficiency of the other doctors in the town and the benefit they could have brought to the people. Had they been allocated to the hospital on a part-time basis, one as a physician, one as a surgeon, and so on, they would have tended to develop special interest and skill in these branches of their work.

It has always been the policy of the British Medical Association in Queensland to foster such an arrangement. It is much to be hoped that in the next few years the State Government will see its way to abolishing the closed hospital system in those towns where it still operates.

But I am leaving out the most important members of the hospital team. Plenty of bush hospitals in Australia run quite well without doctors, but none that I can recall function without nurses. If the nursing staff quits, or if nurses cannot be obtained, the hospital simply closes. This has happened more than once in recent years, and it emphasizes one of the most pressing hospital problems that we face—the shortage of skilled nurses. Queensland is not alone in this; but the fact that it is world-wide should not dissuade us from a courageous and imaginative approach to it. The phrase "shortage of skilled nurses" was used deliberately, for today's nurse must be either skilled—or useless. It would be no solution to increase the intake of probationer nurses by lowering the standards required for entry.

Today's nurse has to be an efficient member of a team which draws gently back to life patients for whom there would have been no hope a few years ago. She has to learn about a fast increasing number of dangerous drugs. She has to control blood transfusions, artificial kidneys, electric shock therapy, patients with desperate burns, and tiny babies in incubators. She has also to answer questions put to her by patients who themselves know quite a lot about disease. Nursing has changed, along with medicine, and practically each new advance makes it more difficult and more responsible. More is needed than the capacity for

sympathy, a cheerful countenance and the ability to place a cool hand on a fevered brow—important though these graces are. Good intellect and intensive training have become essential.

By all accounts there is no real shortage of the right girls with vocations. They are keen to start. But what does shock and disturb everyone is the wastage of these potentially good nurses by resignations during the course. Something must be wrong when more than half of some of the groups of girls who take up nursing resign before they have completed the course.

No business organization would accept resignations from its staff on such a scale without investigating the matter and taking steps to put things right. It is no secret that the position is acute, as recent articles and correspondence in the papers have shown. This is not the occasion to discuss the reasons for which girls who started nursing with genuine enthusiasm give it up in despair; but it is obvious that there must be good reasons. It should not prove impossible to discover by sympathetic inquiry what they are and then to put them right. The British Medical Association would support wholeheartedly a committee set up to inquire into this. I would make a most earnest plea that such a committee, not limited to hospital authorities, but including representatives of medical and nursing associations, be appointed by the Government. There could hardly be a more important investigation for the people of Queensland than this. Their lives literally depend on the hospitals, and without a sufficiency of good nurses the hospitals will fail.

But if the nursing situation is bad, there has been elsewhere an encouraging new move. In 1947 the Council of the British Medical Association in England stated that in the treatment and prevention of disease there was clearly a field for cooperation between clergy and doctors. In 1954 the Royal Melbourne Hospital became a training centre for hospital chaplaincy work. The authorities gave their chaplain official status with the fullest access to records and to the patients under the care of the medical staff. The belief that a minister of religion should be called in only when the patient is beyond human aid has become out of date. It is now accepted that many a person is more sick in mind than in body and as much in need of a priest as of a physician. At the Royal Melbourne Hospital the chaplain now lectures to all medical students and all nurses on this aspect of their work and talks to each incoming team of residents. Most of his time is spent with the sick and their relatives, and valuable work is being done for all sorts of patients, particularly those with anxiety states. Excellent liaison exists between chaplain and medical staff, to their mutual benefit.

One has to know this pioneering development at first hand to appreciate the worth of this new approach to mental and physical ill health, and to understand what a powerful ally medicine has gained. Hospital administrators in Victoria have discovered it. There are now five full-time chaplains in general hospitals in that State, and the Mental Hygiene Authority has just announced the allocation of £10,000 to provide for chaplains in mental hospitals this year. Victoria is to be commended for this. I hope to see clergy appointed in due course to major hospitals throughout Australia, not merely as visitors, but as regular members of the staff, taking their place with physicians, psychiatrists, nurses and social workers as necessary members of the therapeutic team.

And there we must leave this sketchy description of some of the people in our hospitals—the patients, the relatives, the doctors, the nurses, the chaplains—knowing full well that there is a great army of others behind the scenes doing splendid work.

It is not the function of the British Medical Association to administer hospitals, although it is plain that there should be medical men of suitable quality on every hospital board. Lacking this opportunity, we have a duty to evolve and put forward our ideas. Consequently, if my words tonight have in any way fired your imagination, and led anyone to see a vision of our hospitals as they might become, then the evening has been well spent.

NOTES ON ARGENTAFFIN (CARCINOID) TUMOURS: THREE EXAMPLES IN CHILDHOOD.

By REGINALD WEBSTER AND ALAN WILLIAMS,
Royal Children's Hospital, Melbourne.

THE tumour of the alimentary tract designated "carcinoid" by Oberndorfer (1907) and "argentaffinoma" by Masson (1914), ever since its recognition by Lubarsch in 1888 as a histological entity has attracted a measure of interest which may be said to have been sustained in inverse proportion to its frequency of occurrence; for it is a neoplasm which appears over the horizon of any individual pathologist but seldom. Reviews of a sufficient number of examples to warrant their presentation as a series from which conclusions may be drawn have necessitated the search of surgical case records and post-mortem reports covering long periods, as instanced by Pearson and Fitzgerald's study (1949) of 140 carcinoid tumours culled from the autopsy files of the period 1934-1948, and the surgical files from 1910 to 1948, of the Mallory Institute of Pathology, Boston. Deriving his material from similar sources, Foreman (1952) based a commentary on carcinoids on 38 examples collected by combing the files of the University Hospitals of Cleveland for a period only three months short of twenty years from January 1, 1932, and Freidin (1952) found details of 30 carcinoid tumours by searching the records of the Royal Melbourne, Alfred, and Prince Henry Hospitals, Melbourne, for the period 1935-1952. The object of the present communication is to supplement Freidin's presentation of the data relating to carcinoid tumours as exhumed from the records of the three indicated hospitals for adults in Melbourne, by discussion of three examples identified in the Pathology Department of the Royal Children's Hospital, Melbourne, within the ten-year period 1946-1956.

Case I.

Intestinal Carcinoid.

The first patient to excite particular interest as a subject of carcinoid tumour or argentaffinoma was a boy, aged six years and eleven months, who was said to have suffered attacks of abdominal pain, sometimes attended by vomiting, at intervals during a period of eighteen months preceding his admission to the Royal Children's Hospital on November 17, 1947. The clinical notes describe the pain as situated in the right lower quadrant of the abdomen, and three weeks after the child's appendix had been removed, a particularly sharp attack, characterized by severe pain, vomiting, and the passage of a motion which consisted largely of blood, determined a further laparotomy for the reduction of the presumed intussusception—a diagnosis to which the presence of an elongated tender mass, palpable under the scar of the recent McBurney incision, contributed significantly.

It was found that there was no existing intussusception, but the swollen, oedematous condition of the terminal 30 centimetres (12 inches) of the ileum, and enlargement and congestion of the mesenteric glands, were regarded by the surgeon, Mr. Russell Howard, as evidence that a recent small intussusception had undergone spontaneous reduction. At the point at which the invagination of the bowel must have occurred, about 30 centimetres from the ileo-caecal valve, was a tumour of the size of a cherry, which had infiltrated through the wall of the gut to the serosa, and by its protrusion into the lumen had effected an appreciable degree of narrowing of the intestinal channel. The mucosal layer appeared to be intact, but it was so stretched and attenuated by the underlying tumour that it was difficult to be sure of its integrity by macroscopic inspection. In the naked eye examination of the cross section of the growth attention was arrested by its distinctly yellow colour.

In due course the tissue was prepared for histological study and the interpretation of the several microscopic sections as those of an argentaffin carcinoma or "carcinoid" was based on the following histological features:

(i) Masses, nests, and columns of cells, of varying size and contour, permeating a relatively abundant stroma, and exhibiting infrequent alveolar or "rosette" formations on the part of the component epithelial cells (Figures I and II).

(ii) The generally spheroidal configuration of the cells in the central portions of the masses (Figures III and IV).

(iii) The columnar or "palisade" cells at the periphery of the clumps (Figures III and IV). In many of both the spheroidal and palisade cells the vacuoles described by Masson as characteristic of the cytology of argentaffin tumours, and shown by him to contain lipid droplets, are in evidence.

(iv) Columnar cells grouped round vesicles which frequently contain homogeneous and amorphous material—the so-described "rosettes" (Figures IV and V).

(v) The abundant stroma in which muscle fibres are often conspicuous among those of connective tissue (Figure I).

The foregoing points in the histology of the tumour were observed in sections stained by the routine hematoxylin and eosin technique, and from such were prepared the illustrative photomicrographs. The simple hematoxylin and eosin staining permitted the recognition of fine eosinophilic granules, but no attempt was made to adduce the chromaffin, siderophile, or argentaffin granules which distinguish the cytoplasm of the cells of the tumour in question. Although the demonstration of argentaffin granules is desirable, the technique is not without its difficulties, and the silver-reducing granules are not invariably present. Stout (1942) by well-controlled technique was unable to demonstrate argentaffin granules in the cells of three out of four carcinoid tumours of the rectum, of which he reported six. It is generally agreed that carcinoid tumours may be identified on morphological grounds, and that it is not essential to diagnosis to show the presence of silver-reducing granules.

Cases II and III.

Appendicular Carcinoids.

T.S., aged ten years, was admitted to the Royal Children's Hospital on February 8, 1955, suffering from an illness of thirty hours' duration, which was confidently diagnosed by his referring practitioner as acute appendicitis. Mr. Peter Jones concurred in the diagnosis, and, operating forthwith, removed an acutely inflamed appendix, the presence of which had evoked an exudate of turbid fluid in the peritoneal cavity.

In the routine pathological examination incision of a constricted and indurated patch in the middle portion of the appendix showed that at this point the lumen was occluded by a firm yellowish submucosal nodule, not more than 0.5 centimetre in its longest axis. Distally the appendix was bulbous and the lumen contained pus. A microscopic section from the tip of the appendix showed the anticipated acute inflammatory changes, and contrasted strikingly with that prepared to include the conspicuously indurated tissue of the mid-zone. In this were found all the histological features requisite for the identification of an argentaffin carcinoma, or "carcinoid", and it was noteworthy that the growth had not as yet infiltrated through the *muscularis mucosa* to invade the muscle of the bowel wall and the serosa.

The second example of an appendicular carcinoid presented within the short period of seven months, and like the first was an important contributing factor to the surgical emergency of acute appendicitis. The patient, V.T., a girl, aged ten years, was admitted to the Royal Children's Hospital on October 1, 1955, having been ill for two days, and exhibiting symptoms and physical signs which pointed clearly to the diagnosis of acute appendicitis. Laparotomy was performed without delay by Mr. Russell Howard, who removed an acutely inflamed appendix, the tip of which was distended. When the appendix was opened, elevation of the mucosa at one point led to the discovery of a hard white nodule, apparently located in the submucosa. The nodule was about 4.0 millimetres in diameter and distal to it the appendix was distended with pus. The serosa of the appendix was injected and oedematous, but gave no impression of neoplastic infiltration.

The clumps and columns of epithelial cells prominent in a microscopic section of the small white lump in the submucosa of the appendix called for differential diagnosis between adenocarcinoma and argentaffin carcinoma, or "carcinoid". The microscopic appearances were those of a slowly growing tumour, exhibiting much stroma and no obvious mitoses, features which would seem to have afforded every facility for differentiation into true glandular spaces. There appeared to be no such formations, and although "rosettes" were few and numerically not comparable with those shown in Figures IV and V, the section showed examples of "palisading" on the part of the cells at the periphery of the larger clumps. The more closely the sections were studied,

the more insistent became their interpretation as those of "carcinoid" rather than carcinoma (Figure VI).

Discussion.

There is ample precedent for the occurrence of carcinoid tumours, particularly appendicular, in young subjects. The neoplasms in question are on record as having been identified in all decades of life, even that beyond the allotted span of three score years and ten. According to Miller and Herrmann (1942) argentaffin tumours have been reported at all ages above ten days, a statement from which a legitimate inference is that a carcinoid tumour may be congenital and be discovered either surgically or by autopsy in the neonatal period. To this dictum no reference is attached, and in the absence of any attempt at documentation it is scarcely to be accepted.

For the two examples of appendicular carcinoids herein reported as having occurred in a boy and a girl, aged ten years respectively, counterparts abound in the literature of the subject. The ages of 14 patients affected with carcinoid tumours of the vermiform appendix included in Freidin's review (1952) ranged from nine to seventy-five years. Foreman's (1952) group of 19 appendicular carcinoids included an example in a boy aged twelve years.

Extraappendicular carcinoids arise, or it would perhaps be more correctly expressed, attain clinical status at an average age much greater than that at which these tumours declare their presence in the appendix. In four large surveys cited by Foreman (1952) the average ages at which appendicular carcinoids were discovered were 24, 25, 29.5, and 30 years respectively; the corresponding averages indicative of the age at which carcinoids of the small intestine became manifest were 54.9, 55, 57.5, and 58. In general it may be said that appendicular carcinoids, commonly by their determination of a clinical emergency, are detected in the second and third decades of life, while intestinal carcinoids are most likely to betray their presence in the fifth and sixth decades. The appearance of a typical example of a carcinoid, or argentaffin carcinoma of the small intestine, of sufficient duration to have attained the size of a cherry and infiltrated through the musculature of the bowel to the serosa, in the ileum of a boy aged six years and eleven months (Case I) is therefore noteworthy, and we have been unable to find a record of a comparable instance.

Knowledge of the nature of the tumours which had been named "carcinoids" by Oberndorfer in 1907 was notably advanced by the work of Masson (1914:1928), who showed that the neoplasms arose and progressed by proliferation of cells distinguished by the presence within their cytoplasm of granules which reduced ammoniacal solutions of silver salts and were thereby stained black. Such cells, long recognized as denizens of the intestinal mucosa and variously designated chromaffin, enterochrome, or basigranular cells, were most widely known as the cells of Nicolas-Kultschitzky; they are said (Masson, 1928) to have been identified originally by Nicolas and rediscovered by Kultschitzky, but the eponymous glamour seems to have rested with the latter, for they are now known universally as Kultschitzky cells. The sum of Masson's work was that the cells comprising carcinoid tumours were identical with the cells of Kultschitzky, and as the presence of intracytoplasmic silver-reducing granules was their distinguishing hall-mark, a new nomenclature was introduced by which the granules were called argentaffin granules, the cells argentaffin cells, and the tumours derived from them argentaffin tumours.

We confess to a predilection for the term "carcinoid", as being less cumbersome, though admittedly it seems to underrate the malignant propensities of the tumours; it does, however, indicate affinity between these growths and the more common carcinomata of the alimentary tract, at the same time implying peculiar and distinctive differences in morphology and clinical course. The name "argentaffin carcinoma" may be criticized on the ground that silver-reducing granules are not always demonstrable in the cells of the growths so described. Stout's observations (1942) on the lack of argentaffin granules in the cells of three of his specimens of carcinoid tumours of the rectum

have already been noted. Masson (1928) allowed that under certain circumstances and in certain functional states argentaffin granules might not be demonstrable in the Nicolas-Kultschitzky cells; he also noted the deleterious effect of post-mortem changes on the capacity of the granules to react normally to solutions of chrome and silver salts. Stout (1942) based an explanation of the absence of the granules from the cells comprising his specimens of rectal carcinoids on the work of Erapamer, who believed that there were several phases in the development of argentaffin cells. In one phase granules were present, but a substance, "enteromin", necessary for the reduction of silver or chrome salts was absent. The cells of the rectal carcinoids were therefore presumed to be in a "pre-enterochrome" stage. In the fickleness of the histochemical reaction on which it is based lies a serious objection to the argentaffin nomenclature.

The chromo-argentaffin cells of Nicolas-Kultschitzky are present in mammals in the deeper portions of the glands of the alimentary mucosa from the cardia to the anus. They are best studied in the small intestine, where they appear, singly, between the cylindrical epithelial cells in the depths of the crypts of Lieberkühn, and are distinguishable by their form and characteristic reaction to chrome and silver salts. Comparatively few in the stomach and jejunum, argentaffin cells are more numerous in the duodenum and ileum, and abound in the vermiform appendix. Thus it develops that although carcinoid tumours may arise in any portion of the alimentary tract distal to the cardia of the stomach—they have even been described in a Meckel's diverticulum and in alimentary components of ovarian teratomata—those arising in the vermiform appendix greatly outnumber those located in extra-appendicular sites. The terminal portion of the ileum figures as next in favour to the appendix as a carcinoid rendezvous, a term which is used advisedly, as in this segment of the intestine the tumours are frequently multiple.

In the series of 140 carcinoid tumours reviewed by Pearson and Fitzgerald (1949) from the files of the Mallory Institute of Pathology, 98 were located in the appendix and 42 were of extraappendicular origin. Foreman's report (1952) of 38 examples of carcinoid tumours combed from the records of the University Hospitals of Cleveland showed that exactly half (19) were situated in the appendix, that 11 of the remaining 19 arose in the terminal portion of the ileum, and that the residual eight were distributed between the duodenum, jejunum, and rectum. Freidin's figures (1952) relating to the incidence of carcinoids as determined by search of the records of three hospitals in Melbourne, were in similar strain, the vermiform appendix harbouring 14 of the 30 tumours, and the ileum 13 of the remaining 16.

Carcinoids of the Vermiform Appendix.

The incidence of carcinoid tumour of the appendix has been variously estimated as between 0.1% and 0.5% of all appendicular lesions. It usually presents as a hard, single, yellowish or grey nodule, covered by mucosa; exceptionally there may be more than one. The individual tumour may vary in size from microscopic dimensions to a growth of 2.0 centimetres in diameter. cursory examination will fail to detect many appendicular carcinoids, and the two examples which figure in these notes would have been overlooked had the appendices been summarily dismissed as obviously affected by an acute inflammatory process. A carcinoid of the appendix most commonly presents as a bulbous swelling of the tip, but it may be found at any point along the length of the rudiment; stenosis and ultimate obliteration of the lumen result from the inward protrusion of the growth. Dilatation of the lumen distal to the point of occlusion may result in the formation of a mucocele of the appendix, and stenosis sets the stage for recurrent attacks of appendicitis.

As in the two children V.T. and T.S., whose records constitute Cases II and III of this contribution, inflammatory episodes bring many appendicular carcinoids to comparatively early notice and surgical removal. This is

probably the reason why carcinoids of the appendix have been regarded either as benign or as distinguished by a lower degree of malignancy than those which originate elsewhere. In his study of seven examples of carcinoid tumours of the appendix King (1929-1930) found that one had induced metastases in the regional lymph nodes, but among 131 appendicular carcinoids, the sum of those reported and discussed by Freidin (14), Foreman (19) and by Pearson and Fitzgerald (98), none was found to have metastasized. But that the argentaffin cell or "carcinoid" tumour of the vermiform appendix cannot be absolved from the occasional exhibition of malignant properties is shown not only by the observation of King (1929-1930), but by the communication of Altman and Mann (1948) relating to a metastasizing carcinoid tumour of the caecum and appendix; in this report it is stated that at the time of its appearance at least 23 cases of carcinoid appendicular tumours inductive of metastases were on record, and that one such tumour had occurred in a patient aged sixteen years.

Carcinoids of the Small Intestine.

As has been already stated, extraappendicular carcinoid tumours are most frequently located in the terminal portion of the ileum, where they appear as single or multiple submucosal nodules which grow slowly to project in sessile or polypoid fashion into the lumen of the intestine, to penetrate between the muscle fibres of the circular and longitudinal muscular coats of the bowel, and to reach eventually the serosa and the enteric mesentery. Whereas it is very exceptional to find more than one carcinoid tumour nodule in the appendix, multicentric origin has been frequently observed when these neoplasms have arisen in the small intestine. In reporting three cases of carcinoid tumours of the small intestine, all of which had metastasized to neighbouring lymph nodes, Eleanor M. Humphreys (1934) reviewed the literature of the subject and found that a multicentric origin had been noted in 46 (or 30%) of 152 examples of intestinal carcinoids. This figure agrees well with the later estimate of Dockerty and his co-workers (1944) that about one-third of extra-appendicular carcinoid tumours show multiple primary foci. Tumour nodules when multiple usually number from 2 to 10, but tallies of 20, 40, 60 or more are authenticated by Willis (1948), who emphasizes that in addition to the visible growths the mucosa often contains many tiny tumour foci which are disclosed only by microscopic search.

The tendency of tumours of the small intestine, whether innocent or malignant, to provoke intussusception is a well-established observation. From an exhaustive bibliographical research in the world literature of the subject of sarcoma of the intestine, dating from the year 1852, A. Simpson Smith (1938) deduced what he expressed as a 24% expectation of intussusception. The early occurrence of an acute intussusception in all cases of malignant tumours of the intestine, including carcinoids, would be a complication not altogether to be deplored, for thus would the tumours be unmasked at an earlier stage than that at which they become evident in their normal courses. Such was the fortunate event in the case of the little boy H.O. (Case 1), in whom the intussusception that it induced led to the early disclosure of the carcinoid tumour of the ileum by surgical intervention. The development of a tumour mass on the serosa or adjacent mesentery and resulting adhesions to contiguous loops of intestine were thereby forestalled, as were the possibly concomitant knuckling and kinking of the bowel and annular stricture likely to result from contraction of the fibrous stroma of the tumour. By one of these means carcinoids of the small intestine are apt to cause intestinal obstruction, but such a contingency may be long delayed, or indeed never arise. Of the 152 cases of carcinoid tumour of the intestine reviewed by Eleanor Humphreys (1934), 24% were responsible for intestinal obstruction.

It must be confessed that the nature of the ileal tumour in the case of the boy H.O. was not appreciated during the emergency operation, which did not therefore include the excision of a mesenteric lymph node for biopsy or a close

examination of the liver. No information regarding metastases is therefore available, but by recent communication with the boy's parents it has been learned that he has been in good health during the eight years which have elapsed since the removal of his intestinal carcinoid tumour.

In common with other extraappendicular carcinoids those of the small intestine exhibit much greater facility in metastasis than has been recorded for those originating in the vermiform appendix. Humphreys (1934) found that of 152 argentaffin tumours of the small intestine 24.4% had induced metastases, chiefly to the mesenteric lymph nodes and the liver. Cooke (1931) reported 11 examples of carcinoid tumour of the small intestine, three of which he described as malignant and eight as benign. Of 14 carcinoids of the small intestine included in Foreman's review (1952) four had metastasized; two of these had never betrayed their presence symptomatically and were discovered by autopsy after death from unrelated causes. In Pearson and Fitzgerald's series (1949), of 140 carcinoid tumours, 16 of 42 (38%) located in sites other than the appendix induced metastatic deposits in related lymph nodes or more distant sites.

Malignancy of Carcinoid Tumours.

For many years the malignant or benign nature of carcinoid tumours has been assessed by the presence or absence of metastases, a convention rendered necessary by the apparent benignity of the tumour cells in microscopic sections, and the consequent difficulty in forecasting a metastatic course on histological grounds. Even in microscopic sections prepared from metastatic deposits of carcinoid tumours the constituent cells seem to be benign as judged by the usual cytological criteria. But can the distinction between benign and malignant carcinoids be sustained? Are they not all innately malignant, but of progress so slow that many fail to reach the stage of metastatic spread before their leisurely course is terminated by surgical intervention for appendicitis or intestinal obstruction, or by death from other and unrelated cause? Acute inflammatory episodes in appendices stenosed or occluded by the presence of a carcinoid tumour undoubtedly determine the early extirpation of many appendicular carcinoids; hence the infrequent observation of metastases referable to carcinoid tumours of the appendix and the reputation for benignancy which they sustained for so long. At its inception a carcinoid, or argentaffin tumour of the alimentary tract is a small and clinically insignificant submucosal nodule, but even at this stage it exhibits an infiltrative manner of growth, which by slow stages implicates the musculature of the bowel and eventually the serosa. At any phase of this process tumour cells, though not distinguished by the pleomorphism and atypical nuclear features which would suggest malignancy, are to be found in lymphatic vessels. The report by Ransom (1890) of metastasis by a carcinoid tumour of the ileum is generally conceded to have been the first to record such an event, and in the ensuing fifty-six years a number exceeding 400 cases of similar exhibitions of malignancy by carcinoid tumours appeared in the literature, as determined by Reitz (1946). Another survey directed towards the same objective was that of Ritchie and Stafford (1944), who found that of 332 carcinoid tumours, 126 (37.9%) had induced metastases. Particularly impressive as demonstrating malignant capacity is the experience of Pearson and Fitzgerald (1948) with carcinoid tumours of the rectum; two of three patients so affected died from extensive metastatic spread, each within two and a half years from the onset of symptoms. Undoubtedly the term "carcinoid" is inadequate for such as these, which seem to demand the description "argentaffin carcinoma"; on the other hand, as noted earlier, it has been found that the cells of rectal neoplasms of this class are prone to fail in argentaffinity.

Nature and Histogenesis of Carcinoid Tumours.

Prolific have been the writings and many the theories advanced in the endeavour to elucidate the histogenesis and essential nature of carcinoid tumours. Masson's contention that the cells comprising these neoplasms are

identical with the baso-granular, chromaffin and argentaffin cells of Nicolas-Kultschitzky may be said to have become established and to have disposed of hypotheses which assigned the origin of carcinoids to the principal epithelial cells of the crypts of Lieberkühn, or to the large basophilic cells of Paneth, which are normally found in the depths of the Lieberkühn crypts; also rendered untenable have been conceptions of the origin of the tumours which derived them from fetal epithelial rests, notably pancreatic tissue, both exocrine and islet. Aschoff's suggestion that carcinoid tumours were of the nature of "mucous membrane nevi", potentially malignant, made little headway, though in view of Masson's emphasis on the nerve hyperplasia associated with carcinoids, it might have been expected to appeal to those holding the questionable view that cutaneous nevi are derived from specialized cells normally found in certain cutaneous nerve endings rather than from the basal layer of the epidermis. That carcinoid tumours of the alimentary mucosa represented the basal-celled carcinoma of the epidermis in another guise and locale was stoutly promulgated by Krompecher (1919). In many microscopic sections of carcinoid tumours the morphological resemblance to basal-celled carcinoma is striking, but this feature alone does not suffice to establish identity. Epidermal basal-celled carcinomata never exhibit intracytoplasmic argentaffin granules nor do they metastasize.

In his protracted and tenacious studies of the histogenesis of carcinoids Masson (1914:1928) showed that the cells of Nicolas-Kultschitzky, normally indigenous to the alimentary mucosa, and the cylindrical and argentaffin cells which group themselves as vesicles in the carcinoids (Figure V), are identical in every feature. But the physiological role of the Nicolas-Kultschitzky cells remained obscure and cannot yet be said to have been clarified. Ciaccio held that, because of their chromaffinity, the cells produced adrenaline, a proposition which Masson claimed to have disproved, although he allowed the Kultschitzky cells an exocrine function. He also endowed them with an endocrine function and suggested that the chromo-argentaffin cells of the intestine constitute a diffuse endocrine gland. Carcinoid tumours brought into being by proliferation of the Kultschitzky cells he described as endocrine tumours, and approved the observation of Saltykow (1914) that the structure of carcinoid tumours resembled that of certain endocrine glands. Saltykow, incidentally, derived carcinoid tumours from aberrant islets of Langerhans. To an endocrine function of the argentaffin cells Masson ascribed the hyperplasia of muscle fibres which is a recognized feature of the histology of carcinoids, and also the proliferation of nerve fibres manifested as the "neuromata" which he found constantly in the axial region of obliterated appendices. Such neuromata always enclosed argentaffin cells, the presence of which was essential for the maintenance of the hyperplasia of nerve fibres. To this peculiar process of intranervous internal secretion Masson gave the name "neurocrinia", and to the participating argentaffin cells, "neurocrine" cells.

Briefly, the genesis of carcinoid tumours, as formulated by Masson, is initiated by the "budding out" of certain intestinal argentaffin cells and their migration into the nerve fibres of the periglandular plexus. The nerves harbouring the migratory cells, stimulated thereto by the process of "neurocrinia", grow and become neuromata, which disappear if the cells themselves disappear. Carcinoids result from the autonomous proliferation of the isolated "neurocrine" cells present in the neuromata.

The thesis of Masson (1928) has not gained general acceptance, and to the best of our knowledge the problem of the essential nature of carcinoid tumours has not yet been conclusively resolved. The view of Masson that the argentaffin cells of Nicolas-Kultschitzky are differentiated from the intestinal endoderm by the fourth month of fetal life is at variance with that of Danisch (1924), who would assign to them an ectodermal origin from chromaffin cells of the coeliac ganglion, which, he suggests, migrate from the solar plexus and enter the intestinal epithelium in the fourth month of gestation. Ehrlich (1914) described carcinoids as immature neurocytomata arising from sym-

thetic nerves, a view which became difficult to sustain after it was shown that the glandular epithelium of the alimentary mucosa was the principal and normal habitat of argentaffin cells.

At the conclusion of a detailed presentation of seven cases of carcinoid tumours of the appendix King (1929-1930) suggested that many of the difficulties surrounding the nature and relationships of these growths admit of resolution if the argentaffin cells are regarded as nerve endings, closely related to and originally derived from the nervous system. He considered that the nervous origin of carcinoid tumours was presumptively supported by the growth of neuromata with their included argentaffin cells in the alimentary tract as described by Masson, by the presence of similar proliferations of nervous tissue containing the characteristic cells in relation to carcinoids, and by the dominating role of the argentaffin cells in the composition of carcinoids. King further pointed out that the structure of the typical tumour, with its spheroidal argentaffin cells and "rosettes" formed by the grouping of columnar cells round a space or vesicle, provided a histological picture which closely simulated that characteristic of many neoplasms of nervous tissue origin, such as tumours of the brain, retinoblastoma, and neuroblastoma of the adrenal. His conclusion was that the carcinoid tumour was essentially a neurocytoma, a view approximating that of Ehrlich, but differing from it in that it placed the emphasis on the identification of the argentaffin cells with nerve endings.

The Carcinoid (Argentaffin Carcinoma) as an Endocrine Tumour.

From the moment of its recognition as a histological entity to be distinguished from adeno-carcinoma as familiar in the alimentary tract, the carcinoid tumour or argentaffinoma excited great interest. Though under misconceptions regarding the source and nature of the tumour, more than one investigator prior to Masson advanced the suggestion that the tumour cells might elaborate an internal secretion. Oberndorfer (1907), a pioneer in this field and coiner of the term "carcinoid", in reporting six examples of the tumour as they occurred in the small intestines of as many individuals, was non-committal regarding histogenesis, but seemed to favour the possibility that his "carcinoids" were derived from pancreatic rests. Trappe (1907) considered that the rests of pancreatic tissue which he affirmed were common in the gastrointestinal tract were the sources of carcinoid tumours and in this suggestion was supported by Heller and Albrecht (1931). Saltykow (1912) developed the idea of the pancreatic genesis of carcinoids to a belief that they arose from rests composed entirely of islets of Langerhans. Tonniessen (1910), while not advancing any more specific structures than "submucous epithelial rests" as progenitors of carcinoid tumours, on the basis of the similarity of the tumour cells to the cells of the islets of Langerhans, suggested that the neoplasms might function as glands of internal secretion.

Masson (1928), although he rejected the argument of Ciaccio that because of their chromaffinity the Nicolas-Kultschitzky cells produced adrenaline, made much of the endocrine function with which he endowed the chromo-argentaffin cells. He presented them as constituting a diffuse endocrine gland. With Gosset as collaborator (1914) he discussed carcinoids of the appendix in a paper entitled "*Tumeurs endocrines de l'appendice*", and later, with Berger (1923) propounded his thesis of "neurocrinia", the essence of which was that the argentaffin cells of the intestinal mucosa disposed of a secretion in the periglandular nerve plexus of the alimentary mucous membrane. Although other writers accepted Masson's demonstration of the identity of the cells of argentaffin tumours with the cells of Nicolas-Kultschitzky, none could be found to follow him in the conception of endocrine activity which loomed so largely in his exposition of the physiological role of the Kultschitzky cells.

The foregoing recapitulation of the speculations and theories of an earlier day gains interest from the fact

that during the last four years argentaffinoma has emerged as an endocrine tumour, on a firm basis; the product of the secretory activity of its cells has been identified, and its pharmacology studied. The trail of investigation which led ultimately to the recognition of endocrine activity on the part of argentaffin tumours was opened by the clinical observation of the Scandinavian workers, Biorck and his colleagues (1952), who published the case record of a patient in whom cyanosis and pulmonary stenosis were observed in association with malignant argentaffinoma. A further account of Biorck's original case and of five others was given by Thorson *et alii* (1954), who also discussed ten additional cases that had been recorded elsewhere. Other contributions to the growing literature of the subject are those of Branwood and Bain (1954) and of Jenkins and Butcher (1955).

The features of the curious syndrome which has been linked with argentaffinoma, not manifested, however, until metastases, almost invariably hepatic, have been established, are a peculiar patchy cyanosis and transient vasodilatation of the skin, tachycardia, hyperperistalsis with diarrhoea, and valvular changes in the right side of the heart. Evidence has rapidly accumulated that the syndrome is attributable to excessive secretion of 5-hydroxytryptamine (5-HT), which has been found in normal intestinal mucosa and has been shown to be present in normal serum and blood platelets. The substance 5-HT is identical with the "serotonin" of Rapport (1949), a vaso-active substance isolated by Rapport and his co-workers from serum. Abdominal carcinoids have been shown to contain large quantities of 5-HT, and a striking observation was that of Pernow and Waldenstrom (1954), who demonstrated very large amounts of this substance in the sera of two patients suffering from metastasizing argentaffinoma and exhibiting vasomotor skin changes.

Snow and his associates (1955) have described three cases of flushing, cyanosis and diarrhoea as concomitants of malignant argentaffinoma, and the finding of raised levels of 5-HT in the blood; they also demonstrated the presence of 5-hydroxyindolacetic acid, an oxidation product of 5-HT, in large quantities in the urine. Goble, Hay, and Sandler (1955) found, by collecting blood simultaneously from the pulmonary and brachial arteries of a patient in whom the syndrome was fully developed, that two-thirds of the free 5-HT was removed during the passage of the blood through the lungs. The inference from this observation is that 5-HT is converted by enzymic action in the lungs to the apparently innocuous 5-hydroxyindolacetic acid (5-HIAA), which is passed in the urine, occasionally in quantity approximating one gramme in twenty-four hours. Estimation of the urinary 5-HIAA has given consistently high readings in patients known to be subjects of metastasizing argentaffin carcinoma, and all available evidence indicates that it should prove useful in diagnosis. A paper chromatographic method for the estimation of 5-HIAA in urine has been developed by Jepson (1955).

Pulmonary stenosis is not invariably present in patients exhibiting the syndrome attributed to excess of circulating 5-HT, but at necropsy the pulmonary valve is seldom normal; the right-sided distribution of endocardial lesions is explicable by the consideration that the maximum content of 5-HT from a tumour in the intestine and its metastases in the liver must be in the column of blood between the liver and the right side of the heart. No other tumour gives rise to the clinical and biochemical features described as having been identified with argentaffin carcinoma, requiring, however, the presence of a large bulk of tumour tissue for their development; large liver metastases have been present in all reported cases.

Argentaffin carcinoma as an endocrine tumour was made the subject of a leading article in the issue of *The Lancet* of November 12, 1955; in the same issue and in that of December 31, 1955, appeared several interesting papers on the subject. The position to date respecting malignant carcinoid tumours and their endocrine effects was recently reviewed editorially in *THE MEDICAL JOURNAL OF AUSTRALIA* (1956).

Summary.

1. Three examples of argentaffin or "carcinoid" tumours are recorded as having occurred in children aged seven, ten, and ten years respectively, and examined with respect to their clinical effects and pathological features.

2. The vexed question of nomenclature is discussed and a perhaps unorthodox preference for the term "carcinoid" expressed.

3. The two appendicular carcinoids and one intestinal reflect on a very small scale the determined relative frequency of occurrence of these neoplasms in the vermiform appendix and small intestine respectively.

4. The histology of the tumours is detailed, their histogenesis traversed, and the difficulty in forecasting a malignant course by the study of microscopic sections emphasized.

5. The view is expressed that all "carcinoid" or argentaffin tumours are innately malignant, though in their characteristically slow progress many do not reach the stage of metastatic spread.

6. Recent work by which endocrine activity on the part of advanced and metastasizing argentaffin tumours has been established on a firm basis is briefly outlined, and in this connexion a review of the advocacy by earlier workers, notably Masson (1928) of an endocrine function for argentaffin cells is included.

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Legends to Illustrations.

FIGURE I.—Photomicrograph of intestinal carcinoid in low magnification (Case I).

FIGURE II.—Another field from the same section as Figure I: neoplastic infiltration of the muscle of the intestinal wall: alveolar or "rosette" formations.

FIGURE III.—Intestinal carcinoid. Photomicrograph showing the central spheroidal and peripheral columnar ("palisade") cells of a neoplastic clump.

FIGURE IV.—Intestinal carcinoid. Another example of "palisading" at the periphery of an agglomeration of neoplastic cells: also a "rosette".

FIGURE V.—Columnar cells grouped round a vesicle: the so-described "rosette" often prominent in the histology of carcinoid tumours.

FIGURE VI.—Appendicular carcinoid (Case III). Low-power microscopic field from a section of a submucosal nodule: "palisading" of cells discernible in largest clump: much inflammatory cell infiltrate: the section as a whole showed no extension of the tumour beyond the submucosa.

MITRAL VALVOTOMY FOR MITRAL STENOSIS: AN ANALYSIS OF 104 CASES FROM THIS VIEWPOINT.

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ALL the patients under consideration were managed or observed by us at Saint Vincent's Hospital, Lewisham Hospital and Repatriation General Hospital, Concord. At Saint Vincent's Hospital this was done in association with our colleagues on the Cardio-Vascular Unit (Dr. R. Jeremy, Dr. J. Markell, Dr. R. Spedding, Dr. A. Seldon and Dr. D. Wightman). At Lewisham Hospital the cases were entirely our responsibility. At the Repatriation General Hospital, Concord, the medical management was under the care of Dr. K. Manning. We have been greatly helped and guided in our observations by these colleagues.

The material for this paper comprises in all 104 patients with mitral stenosis. Of these, 55 were selected as suitable for operation and the remainder were rejected as unsuitable. Of the 55 patients in the surgical group, 50 have been operated upon—31 at Saint Vincent's Hospital, 12 at Lewisham Hospital and seven at the Repatriation General

Hospital, Concord. One patient of the 50 has been operated upon twice, the second operation being carried out after an interval of nearly four years.

Observations were recorded at the time of examination, although in some cases these were modified in the light of greater experience. Particularly does this apply to the observations made at operation.

Catheter studies have been carried out in only a small number of cases. It was not expedient to employ catheterization in the earlier cases. Even now catheterization is carried out only in selected cases.

AGE.

The average age for the series was thirty-three years. It was approximately the same in medical and surgical groups. Of the surgical patients, three were in their fifties, 11 were in their forties, and seven were under the age of twenty-five years, the youngest being aged eleven years.

This last-mentioned group is commented upon because it is preferable to delay operation until the patient is older. There is then less likelihood of fresh attacks of acute rheumatic fever. However, in all seven life was threatened by rapid progress of the disease and attacks of acute pulmonary oedema. This was particularly so in the case of the boy aged eleven years.

SEX INCIDENCE.

Of the patients 70% were women, but of the 26 who were rejected for operation on account of serious mitral incompetence, 13 were men and 13 were women. This supports the well-known fact that if mitral incompetence is the predominant lesion the incidence is nearly equal in both sexes.

HISTORY OF RHEUMATIC FEVER, "GROWING PAINS" AND CHOREA.

Forty-five of our patients gave a history of rheumatic fever, "growing pains" or chorea. Nineteen of these were in the surgical group and 26 were in the medical group. Just over half the patients with important mitral incompetence gave a history of rheumatic fever, "growing pains" or chorea, whereas only a third of those with mitral stenosis gave such a history. These figures support Wood's (1954) contention that pure mitral stenosis appears to be the least florid form of rheumatic heart disease.

SYMPTOMS.

In commencing a discussion on symptoms we can hardly do better than consider the case of Louis Ponsard. The following is extracted from Observation 46 of Laennec:

Louis Ponsard 16 years old, a gardener, was one day forcibly stopped in the midst of his work, carrying soil in a wheelbarrow, by violent beating of the heart, spitting of blood, coming on without preceding discomfort.

He rested and it quieted down, but it recurred every time he attempted to take the slightest exercise. He changed his trade and went into a paper factory, but soon this also became too fatiguing and his symptoms became more frequent. On 11th February, 1819 he entered the Necker Hospital.

He had never had any oedema, but his slumbers were constantly disturbed by terrifying dreams. He could not carry out any arduous exercise, nor could he walk very rapidly without feeling himself threatened by suffocation.

Four bleedings at intervals of several days, relieved the patient very much.

After a month's rest in the hospital, the patient was very well, from his point of view, and demanded his release.

Dyspnoea.

Shortness of breath was the commonest complaint. It was graded according to its severity, complying with the grades set out by Wood (1954).

Grade 1 patients were able to lead normal lives, but could not keep up with their fellows physically. Grade 2 patients were unable to run or hurry and found walking up hills difficult. This grade was subdivided into grades

2a and 2b according to whether the symptoms were progressive or not. Grade 3 patients could walk only a few hundred yards and were troubled by severe pulmonary symptoms, including paroxysmal dyspnoea or frank pulmonary oedema. Patients totally or almost totally incapacitated were placed in grade 4. This included all frank cases of congestive cardiac failure. Of the patients selected for mitral valvotomy, 22 were in grade 2b, 29 were in grade 3, and four were in grade 4. No patients in grade 1 or grade 2a were operated upon.

Thirty-four of the patients in the surgical group had suffered from paroxysmal dyspnoea and orthopnoea, and nine had had frank pulmonary oedema.

In the medical series there were 30 patients in the first two grades, 10 in grade 3 and nine in grade 4.

Hæmoptysis.

Frank hæmoptysis occurred in 14 of the surgical group. In seven it was thought to be pulmonary apoplexy, and in the other seven it accompanied acute pulmonary oedema. In all cases it was associated with acute pulmonary symptoms. Hæmoptysis also occurred as sputum streaking associated with winter bronchitis.

Angina Pectoris.

Pain in the chest indistinguishable in nature, site and radiation from *angina pectoris* of effort occurred in eight cases in the series. Five of these were in the surgical group. In Wood's (1954) experience there was a high incidence of angina in cases of pure mitral stenosis. The angina disappeared in those cases in which valvotomy had been successful. It must be presumed to be due to low cardiac output.

Winter Bronchitis.

Winter bronchitis occurred in eight of the surgical cases and in seven of the medical cases. It occurred most commonly in the more severe cases with pulmonary congestion or congestive cardiac failure. Its incidence was considerably lower than that reported in Wood's series (1954), undoubtedly owing to the difference in climate.

Systemic Embolism.

Seven of our surgical patients had suffered embolism in major vessels when first examined. In six it was the incident which focused attention upon the heart.

We first encountered the complication in a young seaman, who was admitted to hospital some days after he had sustained a saddle embolus of his aorta. After sympathectomy by Dr. Douglas Miller, he made remarkable progress. Routine examination demonstrated mitral stenosis with auricular fibrillation. Three months after the aortic embolism a mitral valvotomy was performed. We expected to find intraauricular clot, but found none. There were no operative or post-operative emboli.

These observations were reflected in the six other patients, including one who had survived operation for mesenteric embolism. In none were clots found in the auricle. In all but one case fibrillation was occurring. In none were there post-operative emboli.

We have not been able to correlate the operative findings with the incidence of embolism. Calcified vegetations were present in five, but these were occasionally found in cases in which no emboli had occurred. Of the other two cases, in one there were fibrous cusps without vegetations, and in the other a high degree of regurgitation with a densely calcified valve.

These figures parallel those of Sellors, Bedford and Somerville (1953), who found intraauricular thrombi in only one of 14 patients who had previously had emboli. Brock, on the other hand, reported intraauricular thrombi in nine out of 17 cases.

In our experience the occurrence of emboli does not reflect the intraauricular state as regards thrombus formation.

PHYSICAL SIGNS.

General Appearance of the Patient.

A typical mitral facies was seen in 22 cases of the whole series, 16 of which were in the surgical group. Many of

the other patients had peripheral cyanosis of the extremities without the typical malar flush. They complained that their hands and feet were always cold. Some looked prematurely aged. There was a striking improvement in their appearance after successful valvotomy.

These signs are due to low cardiac output brought about by a high pulmonary vascular resistance.

Peripheral Pulse.

The amplitude of the peripheral pulse was nearly always small, particularly in cases of tight mitral stenosis. Water-hammer pulse was felt, not only in patients with frank aortic incompetence but also in 18 of the 28 of those in whom mitral incompetence predominated. Wood attributes the small water-hammer pulse of mitral incompetence to a combination of over-filling of the left ventricle, a systolic leak into the left atrium and a low cardiac output.

Venous Pressure.

Observation of the jugular venous pressure and pulse can be helpful in the assessment of cases.

The jugular venous pressure is raised when the top of the oscillating venous column is at least five centimetres of saline above the sternal angle when the patient is propped up at 30°. There are three venous waves in each cardiac cycle, which may be seen in the neck. They are called the *a*, *c* and *v* waves. The first represents auricular contraction, and disappears when the auricles fibrillate. The *c* wave indicates isometric ventricular contraction and closure of the tricuspid valve. The *v* wave occurs after an interval, the rise of this wave being associated with increasing venous pressure resulting from continued venous return against a closed tricuspid valve. It reaches its peak just before the valve opens and the pressure then promptly falls.

The main departures from normal in these waves in cases of mitral stenosis are the occurrence of abnormal *a* and *v* waves. A giant or abnormally conspicuous *a* wave may be seen when high peripheral pulmonary resistance is present, or when tricuspid stenosis has occurred.

There were two cases in our series in which there was an abnormally conspicuous presystolic *a* wave. In one case we considered that high pulmonary vascular resistance was present, and in the other case we diagnosed tricuspid stenosis.

When the *v* wave was very much greater than that ordinarily seen in normal rhythm or auricular fibrillation, tricuspid incompetence was suspected. In these cases frequently the liver was palpable and pulsating, as well as a tricuspid systolic murmur being present.

We have regarded the tricuspid incompetence as functional and no bar to operation if these signs disappeared after the patient had received treatment for congestive cardiac failure.

If after adequate bed rest and treatment the signs did not disappear, the tricuspid incompetence was regarded as organic and a probable contraindication to operation. In one case, to be described later, the signs did not disappear, but the incompetence was regarded as functional. Operation was undertaken. The signs then disappeared.

Where there is any doubt about the presence of a serious organic tricuspid lesion, cardiac catheterization should be carried out.

Auricular Fibrillation.

Auricular fibrillation was present in 41 cases of the whole series. Twenty of these were in the surgical group and 21 in the medical group. In three cases it was paroxysmal.

The patients with auricular fibrillation were older than those with normal rhythm. The average age in the group with auricular fibrillation was thirty-seven years. The average age of those in normal rhythm was thirty-three years. Auricular fibrillation was more likely to occur in those patients in whom mitral incompetence predominated. Of the 41 patients in the whole series, 21 had mitral incompetence as the predominant valvular lesion.

The relationship between auricular fibrillation and systemic emboli has been discussed.

Systemic Hypertension.

A significant degree of hypertension was not found in any of our patients with the exception of one in whom it tended to be intermittent. This coincides with general experience that the combination of mitral stenosis and hypertension is a rare finding.

Cardiac Impulse.

The nature of the cardiac impulse was considered a most important physical sign in the selection of patients for operation.

Apex Beat.

A left ventricular heave at the apex which lifted the palpating finger was detected in 23 of the patients in the medical group. Sixteen of these patients had a serious degree of mitral incompetence, and seven had an important aortic valve lesion. There were only two patients in the surgical series who had an apex beat of this type. In other cases the apex beat was tapping in nature. The importance of this sign cannot be over-estimated; but one must be careful to avoid error in those in whom a huge right ventricle occupies the apex of the heart. Fluoroscopic screening and study of the electrocardiogram will prevent error in such cases.

Right Ventricular Heave.

A lift over the right ventricle is best felt in the third and fourth left intercostal spaces to the left of the sternum. This sign indicates right ventricular hypertrophy, but it should be substantiated by radiological evidence and the presence of right ventricular preponderance in the electrocardiogram.

The lift was found in 30 cases in the surgical group and 18 cases in the medical group. In the surgical group these patients were regarded as having a high degree of pulmonary hypertension and a high pulmonary vascular resistance associated with a severe grade of tight mitral stenosis. In the medical group this sign occurred in five patients who were regarded as having a tricuspid valve lesion.

Auscultation.

The Diastolic Murmur of Mitral Stenosis.

Laennec has left the following description of his examination of Louis Ponsard.

The hand, applied to the region of the heart, felt its beats with considerable force and received also the sensation which we have described under the term of "purring-thrill" [*frémissement catatre*]. This thrill was not continuous, but came at regular intervals of equal length, without intermissions. It was not synchronous with the pulse beat, it appeared rather to alternate with the beat.

The cylinder [stethoscope] applied between the cartilages of the fifth and seventh ribs on the left side, allowed one to hear the contraction of the heart in the following manner; the contraction of the auricle was extremely prolonged, took place with a dull bruit, very strong and quite like the sound produced by a file rubbing on wood. This bruit was accompanied by a purring, heard by the ear, and which was evidently the same as that felt by the hand. At the end of the contraction one heard a loud bruit, accompanying the impulse and synchronous with the pulse; the contraction of the ventricle was too short by three-quarters.

These were fundamental observations; they still are.

The murmur of mitral stenosis is a low-pitched, rumbling, mid-diastolic murmur with or without presystolic accentuation. The presystolic accentuation is usually missing when the heart is fibrillating. It is wise to listen for the murmur beginning in mid-diastole even when the presystolic accentuation appears to be obvious. In this way errors will not be made in diagnosing mitral stenosis on a roughened or split first heart sound. Typical presystolic accentuation and mid-diastolic murmur were present in 64 cases in the series; 43 of these were in the

surgical group. It was present in all patients in the surgical group with normal rhythm except one. It is an important indication of tight mitral stenosis, and a vital sign in the selection of patients for valvotomy.

Other Auscultatory Signs of Pure Mitral Stenosis.

A few other signs paralleled the presystolic murmur in importance as an indication of tight mitral stenosis. These signs were the accentuated first heart sound ("the closing snap"), the opening snap and the accentuated second pulmonary sound.

The Mitral First Sound.—The accentuated first heart sound was present in 38 cases of the surgical series and in only 11 of the medical series. The factors tending to dampen the first sound are auricular fibrillation, mitral incompetence and a high pulmonary vascular resistance. Mitral incompetence is the most important. High pulmonary vascular resistance tends to dampen not only the intensity of the first heart sound but also the intensity of the presystolic element of the mid-diastolic murmur. We have demonstrated this phenomenon at operation by pulmonary artery compression, but then this is no new observation. Laennec made it 136 years ago. Of Louis Ponsard he wrote:

Immediately after each bleeding the purring thrill ceased to be felt by the hand and the rumble of the auricle instead of being like the noise of a file, became like the sound of a bellows, when one holds the valve open with his finger.

The Opening Snap.—The opening snap is a sharp, high-pitched third sound coming immediately after the second sound, heard best immediately to the left of the sternum in the fourth or fifth left intercostal space. It is thought to be due to the abrupt backward displacement of the mitral valve cusps when the pressure in the left ventricle rapidly falls below that in the left atrium at the end of the period of isometric relaxation. We have been unable to verify this at operation. It is distinguished from the third heart sound in that it is closer to the second sound, shorter, sharper and of a higher pitch. It is well heard on expiration, whereas the third heart sound is heard better on inspiration. It is distinguished from a split pulmonary second sound in that the latter is not heard so low down to the left of the sternum. Also the degree of splitting of the second pulmonary sound is increased by inspiration. The opening snap is one of the most important signs of predominant mitral stenosis. It hardly ever occurs if a serious degree of mitral incompetence is present. It was present in 42 of the surgical cases and in only nine of the medical cases.

The Pulmonary Second Sound.—By the pulmonary second sound is meant the second element of the second pulmonary heart sound. It is rarely heard beyond the pulmonary area. It is studied with the patient holding his breath in deep inspiration. This widens the splitting, and it is necessary to appreciate the split before the pulmonary element can be properly studied. The intensity of this sound is an important, but not infallible, guide to the degree of pulmonary hypertension present in mitral stenosis. There was an accentuated sound element of the second pulmonary sound in 42 cases in the surgical series and in 13 in the medical series.

Auscultatory Signs when Mitral Incompetence is Predominant.

We can now turn our attention to the auscultatory signs which indicate a predominance of mitral incompetence. These signs are the mitral systolic murmur and the third heart sound.

The Mitral Systolic Murmur.—A mitral systolic murmur was heard in 12 of the surgical cases, but in only four was the murmur of grade 2 intensity or greater. In two subjects with impressive systolic murmurs the presence of mitral incompetence was confirmed at operation. One patient with a grade 2 systolic murmur was found at operation to have predominant mitral incompetence. The valve was calcified and inoperable. On the other hand 34 of the medical patients had mitral systolic murmurs, and in 27 it was of grade 3 to grade 4 intensity. In only

three was it of less than grade 2 intensity. An impressive mitral systolic murmur is a most important sign of mitral incompetence.

The Third Heart Sound.—The characteristics of the third heart sound have been discussed in comparing it with the opening snap. It is never heard in cases of pure mitral stenosis. It is frequently present in patients with gross mitral incompetence. It was not heard in any of the surgical patients in this series. It was heard in 12 of the medical patients, all of whom had a serious grade of mitral incompetence. It is an important sign, because it is a contraindication to operation. Wood (1954) makes the following comment with regard to his series: "Of the surgical cases with the third heart sound, not one did excellently or even well and indeed three-quarters of them died." He also pointed out that the third heart sound in gross mitral incompetence might be more like the opening snap in that it was less delayed and shorter and more highly pitched in quality than usual. This fact was noted in cases in the medical series.

SPECIAL INVESTIGATIONS.

The Electrocardiogram.

The main findings of value in the electrocardiogram were the presence of a *P mitrale* and the presence or absence of left or right ventricular preponderance. The *P mitrale* is a widened *P* wave of normal or only slightly increased voltage which is notched, slurred or flat-topped. It was present in 32—that is, in all but three—of the surgical patients with normal rhythm. On the other hand, it was present in only 10 of the cases in the medical series. The *P mitrale* is therefore a valuable sign in that it is nearly always present in cases of predominant mitral stenosis of more than trivial degree when normal rhythm is present.

Occasionally it is replaced by a *P pulmonale*, mainly when there is extreme pulmonary hypertension. The *P pulmonale* is a tall *P* wave with a voltage range of two to five millimetres, which is not widened and is therefore peculiarly sharp in appearance.

Left ventricular hypertrophy was not present in any of the patients subjected to operation. However, it was present in 24 cases in the medical group. It was mostly present when there was an important degree of mitral incompetence (18 cases) or when aortic incompetence (six cases) was the predominant lesion. Consequently, it was most often a contraindication to operation.

Right ventricular hypertrophy was present in 18 of the cases in the surgical series and in 10 in the medical series. In the surgical series it was associated with cases of pure mitral stenosis of severe degree in which pulmonary hypertension had developed.

X-Ray Appearances.

The configuration of the "mitral" heart is well known (Figure 1) and a detailed description is not intended. We should like to draw attention to the following features.

Calcification.

It is of importance to recognize the presence of calcium in the mitral valve. To do so it must be looked for during routine fluoroscopic screening, for it is easy to overlook its presence in a plain X-ray film.

We found well-defined radio-opaque calcium in four of the surgical cases. We were not influenced adversely by its presence. In three the valve split easily and the end result was satisfactory. In all three, craggy, exuberant excrescences were present, but despite this there were no post-operative emboli. In the fourth the valve was a smooth, rigid, rock-like structure with a high degree of regurgitation. The calcium was deposited throughout the valve. In this last-mentioned case a grade 2 systolic murmur was present; yet at operation the regurgitation was found to be considerable.

We have more recently rejected cases, not included in this series, because of the combination of calcified mitral valve and mitral systolic murmur of grade 2 intensity or greater.

Calcium occurring in the form of small plaques, undetected by X rays, was a frequent operative finding.

Size of the Left Ventricle.

It is a matter of considerable experience to decide the size of the left ventricle with accuracy. The distortion brought about by right ventricular enlargement can readily lead to a mistaken assessment of left ventricular enlargement. It is of considerable importance, for only too frequently the decision whether to operate on a patient with a mitral systolic or an aortic diastolic murmur hinges on the correct assessment of left ventricular size.

We find it difficult to estimate the size in some cases. We have assumed that on fluoroscopic screening, with the patient at an angle of 45° in the left anterior oblique position, the ventricle should just clear the anterior surface of the bodies of the vertebrae. However, recent work has shown that in normal people this angle can vary from 16° to 60°. Equivocal X-ray findings must be considered in conjunction with the clinical and electrocardiographic findings.

Size of the Left Auricle.

A very large left auricle is often associated with mitral regurgitations, although it may occur with pure mitral stenosis. However, a giant left auricle always means mitral incompetence. As evidence of mitral regurgitation we have found systolic auricular pulsation an unreliable sign.

All patients in whom we found regurgitation at operation or in whom we produced regurgitation at operation, were accurately examined fluoroscopically during convalescence. In none could we demonstrate systolic auricular pulsation.

The Contour of the Left Border of the Heart.

We like to see the double hump (Figure 1; pulmonary artery, surmounting auricular appendage) on the left border of the heart. From the surgical point of view the presence of the lower hump is reassuring. It means a sizeable appendage—something to work with.

Absence of this hump means a small appendage. If the disease has been of long standing, fibrillation is persistent and the lower hump is absent, we are on our guard. In our experience it often signifies a solid auricle and a fibrosed appendage. Figure 2 demonstrates the straight left heart border in such a case.

In short, we do not like to see a straight left border, particularly in a grade 3 or grade 4 patient. It often means more hazardous operation, a tougher valve in a less tolerant heart.

Pulmonary Hypertension.

Carmichael, Julian, Penrhyn Jones and Wren (1954) have attempted to correlate the appearances of the postero-anterior chest film and the degree of pulmonary hypertension in mitral valve disease. Their observations were checked by cardiac catheterization. They found that the most important sign was the presence of the "lines B" of Kerley. These are small horizontal lines about one inch long seen near the costo-phrenic angles, occurring classically in silicosis. They postulated that their presence was due to congested sub-pleural lymphatics forming bands opaque to the passage of X rays. They concluded that a fairly accurate estimate of the pulmonary artery pressure could be made by considering the presence or absence of lines B in conjunction with a radiological assessment of the pulmonary arteries.

The appearance of the pulmonary vessels has been classified by Carmichael and his co-workers as follows: Group 0, normal; Group 1, near normal, but the size of the pulmonary hilar shadows was sufficient to raise doubts as to normality; the peripheral vessels were normal; Group 2, definite enlargement of the pulmonary artery hilar shadows; the peripheral vessels might be normal, but there might be tortuosity of the basal vessels; Group 3, gross enlargement of the hilar shadows; the peripheral vessels were seen right out to the periphery, and in fact would often be classified as "congestive changes"; Group 4, again gross enlargement of the hilar shadows, but with clearing of the peripheral third of the vascular pattern.

One of our patients came into group 4 of this classification. She had enormous dilatation of the main pulmonary artery (Figure III). At operation, after commissurotomy, this tense, distended pulmonary artery deflated in a remarkable fashion.

Cardiac Catheterization.

Cardiac catheterization as a method of investigation has been carried out in seven cases. Except in a small proportion of cases it is rarely essential in assessing patients for valvotomy. The small group in which catheterization becomes an essential or desirable method of investigation include patients who complain of severe symptoms, but who on physical examination are found to have less definite signs of tight mitral stenosis than one would expect.

There are two possible explanations for this. The first is that the patient has an overlying cardiac neurosis and the second is that signs of mitral stenosis may have been dampened by high pulmonary vascular resistance. In these latter cases one expects to find a right ventricular heave and right ventricular preponderance in the electrocardiogram. If there is any doubt, cardiac catheterization will resolve it. This fact was demonstrated in two of our cases.

Cardiac catheterization may also be of assistance if there is any question as to the presence of organic tricuspid disease.

A high pulmonary vascular resistance is no contraindication to operation, as the changes are reversible.

Valvotomy was highly successful in some of our cases in which there was high pulmonary vascular resistance. The condition of these patients in the early months after operation was only moderately satisfactory, but they progressively improved, sometimes to an extraordinary degree, as the months went by. It has been proved by subsequent cardiac catheterizations in Wood's (1954) and other series that the pulmonary vascular resistance falls progressively, although it may take months to do so. The clinical condition of the patient progressively improves as the high pulmonary vascular resistance falls.

SELECTION OF PATIENTS.

Upon the foregoing analysis of symptoms and signs has been based the selection of patients for valvotomy.

Age.

It has been shown that mitral valvotomy can successfully be carried out in a wide range of age groups. One hesitates to operate on patients under the age of twenty-five years and over the age of fifty years; in the first instance because of the likelihood of recurrent rheumatic infection and in the second because of the possibility of myocardial ischemia. These are the exceptional cases, and one must deal with each case as an individual problem. In adolescence and early adult life one's hand may be forced by the threat to life of acute pulmonary oedema or by complete disablement from right-sided congestive cardiac failure and low cardiac output.

At the other end of the scale we can say that it is quite justifiable to operate on patients in their forties if the usual indications for valvotomy are present. A small number of patients have been successfully operated on in their early fifties; but here the operative risk is higher and the chances of a good result are diminished.

Dyspnoea.

Dyspnoea is the outstanding symptom, and in this series patients with dyspnoea of grade 2b, grade 3, and grade 4 severity have been operated upon. The majority of the patients (46) have been in grade 2b and grade 3. It does not seem justifiable at the present time to operate on patients in grade 1. Many of them may never be seriously inconvenienced by their condition and it is wrong to submit them to any operative risk, however small. In grade 2a the decision is left to the patient. He is not urged to undergo mitral valvotomy, but mitral valvotomy

is advised if he is dissatisfied with his lot in life as it stands and wishes to be able to lead a more active and useful life.

When acute pulmonary oedema has occurred owing to tight mitral stenosis, treatment is urgently indicated and mitral valvotomy should be carried out at the earliest possible date. This is a lesson which Wood (1954) has pointed out and which should be learnt by all. These patients should be immediately admitted to hospital, where they are digitalized, placed on a diet containing less than one gramme of sodium chloride per day, and may be given mercurial diuretics two or three times weekly. They should not be allowed to leave hospital until mitral valvotomy has been performed.

Hæmoptysis.

Hæmoptysis usually occurs in severe grades of the disease and is often associated with severe pulmonary symptoms. Most of these patients therefore fall into grade 3 and require mitral valvotomy.

Systemic Emboli.

Systemic emboli do not contraindicate operation. Their occurrence, as has been pointed out, may bring the patient to operation.

Final Selection for Operation.

The key to final selection for operation lies in the correct interpretation of physical signs.

The ideal patient for operation will present the following criteria:

1. Signs of low cardiac output. There may be cold extremities or peripheral cyanosis, or wizened faces, or in children under-development, and in some (16 of this series) the mitral malar flush.
2. A pulse nearly always of low amplitude. Fibrillation is not uncommon; it occurred in 20 of our surgical cases.
3. A tapping apex beat, not displaced. There is often a palpable diastolic thrill at the mitral area (37 cases in the surgical series). A right ventricular lift just to the left of the sternum is of special significance, as it often indicates a severe degree of mitral stenosis with pulmonary hypertension.
4. Diagnostic heart sounds. The murmur should be classical, with a snapping first sound. Usually there is an opening snap with an accentuated second element of the second pulmonary sound.

CONTRAINDICATIONS TO OPERATION.

The following are contraindications to operation.

Mitral Incompetence.

Mitral incompetence constitutes the chief problem in the selection of patients for operation. The assessment of its degree can be really difficult. In this we are guided by the following: (i) a small water-hammer pulse; (ii) a lifting apex beat displaced to the left; (iii) an impressive systolic murmur conducted into the axilla, and perhaps a third heart sound; (iv) radiographic evidence of left ventricular enlargement; (v) electrocardiographic evidence of some left ventricular preponderance if the six precordial leads are examined.

Aortic Valve Disease.

If the classical murmurs of aortic stenosis or incompetence are present, the differential pulse pressures and the size of the left ventricle will indicate the degree. When the degree was not considered to be great and we were convinced that the mitral valve lesion was the predominant one, we did not consider an aortic valve lesion a contraindication to operation. There were four surgical patients considered to have some degree of aortic incompetence. In another case the early blowing diastolic murmur, heard to the left of the sternum, was localized and associated with signs of pulmonary hypertension. We believed that in this case the murmur was the Graham-Steel murmur of functional pulmonary incompetence.

In the medical series there were 18 cases of aortic valve disease, and in 13 the aortic valve lesion was the sole reason for rejection of the patient for operation. In three of these cases there was an important degree of aortic stenosis as well as aortic incompetence.

Tricuspid Valve Disease.

Organic tricuspid incompetence of important degree is a contraindication to operation. It is to be suspected when there is a systolic murmur medial to the apex beat, an undulating venous pulse in the neck with a large v wave, and a pulsating liver. An organic tricuspid valve lesion was present in five cases of the medical series. In one case there was tricuspid stenosis and in the other four tricuspid incompetence. If the tricuspid incompetence is functional the venous pulsation and the pulsating liver will often disappear with bed rest and treatment for congestive cardiac failure, but not always. In one patient, a woman aged thirty years, they persisted. However, the signs of tight mitral stenosis were so compelling that valvotomy was carried out at the Repatriation General Hospital, Concord. They then disappeared and this patient has made a spectacular recovery.

The problem of organic tricuspid incompetence can be difficult. Where there is doubt, cardiac catheterization is indicated.

We have to date considered well developed mitral incompetence, aortic incompetence and tricuspid incompetence as contraindications to valvotomy. We have not as yet carried out coincidental operation on other valves, nor have we attempted to reconstitute the grossly incompetent mitral valve.

Rheumatism.

Evidence of recent rheumatism is a contraindication to operation, at least until some months after cessation of activity.

VALVOTOMY IN CHILDHOOD.

Our experience among children has been gratifying.

A boy, aged eleven years, was admitted to Saint Vincent's Hospital after three recent attacks of acute pulmonary oedema. In addition he had had an attack of acute rheumatic fever three months prior to his admission to hospital. The boy was thin, pale and cyanosed. He was fearful of moving about too much in bed. After a great deal of consideration, valvotomy was decided upon and ultimately performed through an extremely tense auricular appendage. It was astonishing to see the tenseness disappear from the pulmonary veins. The result has been unbelievable. The boy has gained 25 pounds in weight, leads a normal life and indulges in all activities. There has been no sign of rheumatic reactivity.

When life is threatened by acute pulmonary oedema there should be no hesitation in advising mitral valvotomy. Children do very well, and even if they should develop active rheumatic infection at a later date giving rise to further valve involvement and stenosis, there seems no reason why a second operation should not be performed in adult life.

In those children with high pulmonary vascular resistance giving rise to a low cardiac output, general physical development may be seriously retarded. Herein lies a second indication for valvotomy in childhood.

Figure IV depicts twin brothers, aged seventeen years. The boy on the right has well developed mitral stenosis. He is in grade 2a.

When one sees the dramatic results of successful valvotomy in these undeveloped children, there can be little doubt but that the operation has a definite place in their treatment.

PREGNANCY.

We have given consideration to the question of valvotomy during pregnancy on seven occasions.

On the first occasion the patient, a *primipara*, had had one attack of acute pulmonary oedema which had almost proved fatal, and a number of bouts of paroxysmal nocturnal cardiac dyspnoea. The symptoms began in the second month of pregnancy. She was admitted to Lewisham Hospital. She

was found to be bed-ridden, with very limited exercise tolerance. After valvotomy she made a good recovery, remained well throughout the latter months of pregnancy and finished with an uneventful confinement. She has been very well subsequently, leading practically a normal life.

The second experience was an unhappy one.

The patient, a somewhat obese *primipara*, aged thirty-two years, was admitted to Lewisham Hospital early in the fourth month of her pregnancy. She had rapidly become bed-ridden with severe dyspnoea. She was considered suitable for valvotomy. Pre-operative treatment was begun and a date was set. On the day prior to operation she developed tachycardia and operation was deferred. A second date was set, but as time drew near she developed hyperemesis with ketonuria, and operation was again deferred. Two weeks after this decision, the patient had a sudden attack of acute pulmonary oedema, aborted, and died in a few minutes. Autopsy revealed a mitral orifice through which a lead pencil could just be passed. Both commissures split with ease.



FIGURE IV.

Twins, aged seventeen years. The boy on the right has grade 2a mitral stenosis.

There is no doubt that valvotomy would have saved this woman.

So impressed were we by the two cases quoted that we were somewhat over-anxious about our next case.

Early in pregnancy the patient had two attacks of nocturnal cardiac dyspnoea. Valvotomy was performed early in the fourth month. Mitral stenosis was present, but it was of mild degree.

Very early in pregnancy the development of a hyperdynamic circulation can accentuate symptoms and signs. The patient may for the first time develop paroxysmal cardiac dyspnoea. If she is rested and treated with digitalis, in most cases the symptoms will not recur during the pregnancy.

However, dyspnoea, paroxysmal dyspnoea, pulmonary oedema and haemoptysis early in pregnancy, particularly in *primipara*, are toxins to be heeded. If rest and digitalis are ineffective there should be no hesitation in performing valvotomy. These patients are much more likely to develop fatal pulmonary oedema than non-pregnant patients.

In the remaining four cases a conservative attitude was adopted. Three of these patients have already successfully completed their pregnancies.

PRE-OPERATIVE PREPARATION.

The patient is admitted to hospital a fortnight before operation. He is confined to bed and given digitalis. He is placed on a diet containing less than one gramme of sodium chloride daily and is given injections of mercurial diuretics twice a week. This preparation is to avoid the hazard of pulmonary oedema or congestive cardiac failure during or immediately after operation. We have had no trouble with sodium depletion effects with this regime.

During the preparation of pregnant patients for operation, tachycardia of some degree may persist despite adequate digitalis therapy. We think that these patients should not be over-treated with digitalis in an attempt to slow the pulse below 90 or 100 per minute if the rate does not drop with ordinary methods of administering digitalis. The electrocardiogram will indicate whether digitalization is adequate.

POST-OPERATIVE MANAGEMENT.

Careful post-operative management is vital. It is particularly so for those whose auricles are grossly diseased and for those in whom the state of the mitral orifice has not been improved.

Cardiac Failure and Pulmonary Oedema.

Our experience with the first patient upon whom we performed valvotomy is worth recording.

On the second day after operation her condition deteriorated. The pulse rate rose to 130 per minute. The chest filled with fluid. On the third day after operation her condition was worse; epigastric pain and vomiting began. Her pulse was 140 per minute. The left side of her chest was full of fluid, and the lung was submerged. Her chest was aspirated, and what appeared to be blood clot was withdrawn. We thought that she must have been having a post-operative hemorrhage, but it was difficult to correlate the clinical findings with those of hemorrhage. Nevertheless, operation was undertaken. When the left side of the chest was reopened, a large mass of clot was evacuated. It was found to be clotted serum with a small layer of blood clot on top. Upon evacuation of this clot the entire posterior chest wall was seen to be sweating, literally exuding oedema fluid. In retrospect it appears extraordinary that this could have occurred. The patient had not been treated with digitalis or otherwise prepared in the way now done. In effect, she had gone into acute cardiac failure. The chest was closed. After treatment with digitalis and diuretics she rapidly recovered. We carried out a second valvotomy on this patient four years later.

Three other patients were very ill after operation owing to congestive cardiac failure. All had had fibrillation before operation, but after operation the fibrillation became very rapid and difficult to control. With adequate digitalis therapy and the use of mercurial diuretics these patients settled down and subsequently did well.

Pulmonary oedema has not been a problem except in one case, in which it nearly proved fatal.

The patient (grade 3), a man, aged thirty-nine years, was found at operation to have predominant mitral incompetence with a calcified inoperable valve. Nothing could be done to improve the mitral orifice. An X-ray film taken on the fourth day after operation showed opacity of the chest due to pulmonary oedema. He was extremely distressed and cyanosed, with signs over the whole of his chest. The aspiration of 250 cubic centimetres of lightly blood-stained fluid from the left side of the chest was enough to increase his vital capacity sufficiently to tide him over until the diuretics had fulfilled their task. Two days later an X-ray film of his chest was practically normal.

Auricular Fibrillation.

In patients with auricular fibrillation before operation, we are not surprised at post-operative disturbances of rhythm. We would say that the more diseased the auricle the greater the likelihood of severe post-operative fibrillation. It can be alarming and can lead, as has already been pointed out, to acute congestive cardiac failure.

Post-operative fibrillation occurred on eight occasions in patients in whom there had been no pre-operative fibrillation. In three the rhythm reverted spontaneously to normal after a few days, and in three others normal rhythm was restored with the aid of quinidine under heparin cover. In the other two, post-operative auricular fibrillation was permanent, recurring after two or more attempts had been made to restore normal rhythm. These patients did well despite this complication, once the rate was controlled with digitalis.

Post-Commissurotomy Syndrome.

Fever and pain in the left side of the chest occurred in seven cases after operation. Five of these patients settled

down rapidly within two or three weeks. In two cases the fever and pain were also associated with generalized joint pains. When the condition persisted over many weeks despite treatment with antibiotics and salicylates, recourse was had to cortisone and in both cases the condition settled down. In both cases, on suspension of cortisone the condition flared again and settled only with resumption of cortisone therapy and a maintenance dose carried on for a period of some months. The sedimentation rate was very high in both cases and there seemed no doubt that symptoms were associated with a recrudescence of a rheumatic infection.

The occurrence after mitral valvotomy of chest pain and fever, together with the less prominent and less frequent symptoms of cough, hæmoptysis, dyspnoea and arthralgia, was described by Elster (1954) and his co-workers and called post-commissurotomy syndrome. They suggested that the syndrome represented a self-limited form of pericarditis and pleuritis induced by the trauma of operation in patients with rheumatic heart disease. They suggested that salicylates appeared to abbreviate the illness, and recommended suppressive salicylate therapy for all post-commissurotomy patients.

From our experience in the two cases quoted we believe that the condition can occasionally fail to respond to salicylates and that cortisone may be indicated. We agree that in the majority of cases the condition settles down quickly with salicylates.

Psychosis.

Only one patient in our series manifested some psychotic features.

This patient became intensely introspective, anxious and depressed, and complained of headaches and somewhat bizarre cerebral symptoms. An electroencephalographic examination was carried out to exclude a focal cerebral lesion, but was found to give negative results, except for a mild generalized epileptic tendency. This patient apparently had a somewhat unstable nervous system and had reacted in this way to the stress of operation. She subsequently settled down and was reasonably well mentally when she returned home.

Embolism.

In this series there was only one post-operative systemic embolism.

The patient, a woman, aged thirty-eight years, on the eighth day after operation developed a headache, became dizzy and complained of blurring of vision. She was found to have a complete left homonymous hemianopia. She was given heparin. All her symptoms and signs disappeared within twenty-four hours.

At the time we thought that the evidence was hardly enough to classify the occurrence as a post-operative embolism.

Some time later a cyanotic boy, aged thirteen years, developed complete left flaccid hemiplegia on the ninth day after pulmonary valvotomy. He was given heparin. He had a complete return to normal function within twenty-four hours.

In retrospect, we have now classified the case described as one of post-operative embolism.

There was one pulmonary embolism of a minor nature which delayed convalescence for two weeks.

Streptomycin Vertigo.

There was one case of streptomycin vertigo. The patient, a young woman, had a satisfactory commissurotomy, but was still considerably incapacitated by her vertigo two months after operation.

OPERATION.

Our initial valvotomy at Saint Vincent's Hospital was performed in August, 1951.

In this first endeavour the patient decided the course. She was a young woman, aged twenty-one years. She had a series of attacks of acute pulmonary oedema, ultimately a nearly fatal attack whilst in hospital. The heart was small; there was no congestive failure. She was the ideal subject.

This initial approach was tinged with apprehension. Respect for the organ, the unknown within the auricle and wonder regarding hemorrhage were responsible.

On May 6, 1925, Sir Henry Souttar performed the first mitral valvotomy at the London Hospital. In his description he made the following statement:

The method of digital exploration and fracture through the auricular appendage cannot be surpassed for simplicity and directness. The accuracy and precision of the information obtained was remarkable. The facility and safety of the procedure impressed all.

Despite these words our first valvotomy was an impetuous affair, with bleeding about the purse-string, rapid dilatation rather than commissural fracture and hasty reapplication of the clamp. Four years later we again performed valvotomy on this patient. Each venture brought more confidence and less anxiety, and above all established firmly in our minds how tolerant is the heart.

At first we used an auricular purse-string suture, then operated on about 40 patients without it, and are now returning to it again, using it in conjunction with the Rumel tourniquet. It certainly is of value when the knife is used. It allows of slower and more deliberate attempts at digital fracture when the incision in the auricular wall is not quite snug about the finger.

In one patient, a boy, aged eleven years, the tenseness and turgidity of the appendage were extreme. The finger fitted snugly in the auricular isthmus, yet with each movement the auricle ejected a stream of blood beside the finger. The valvotomy, though easy, was hurried.

We have encountered most of the technical difficulties. Of them all, the pale, hard, pulseless appendage of the thrombosed auricle commands the greatest respect. In all but one of these we were able ultimately to find an entrance into the auricular cavity. We used the method of a linear incision between two parallel rows of stay sutures to effect entrance. The incision was deepened until the firm, white, tough layer of organized clot was encountered. Separation of this was begun with a dissecting swab. The finger then gently continued until it gradually worked its way into the auricular cavity. Upon withdrawal of the finger the sutures were crossed and tied.

We believe that in these cases the auricular incision is best made near the entrance to the superior vein. Here clot is least likely to be adherent, and the smallest amount of manipulation is necessary to insert the finger. If the incision is made higher up the clot is separated with greater difficulty, and there is greater likelihood of tearing the auricular wall if there are dense bands holding the clot, and far greater likelihood of dislodging a thrombus. The advent of the Rumel tourniquet has facilitated these procedures, and we now use the method of Bailey and Neptune (1954) as depicted in Figure V.

Sometimes the appendage is clotted and the auricle is not. Then the clamp can often be placed, the appendage opened and the clot dissected away before insertion of the finger.

We have found Brock, Baker, Campbell and Wood's method of release of the clamp a useful method of getting rid of recent soft clot.

We have never as yet used the pulmonary veins as a route of entrance.

We have been astonished by the ease with which many of the valves split and confounded by the difficulty of splitting others. It is our belief that if the knife has to be used the anatomy of the valve is such that the final result can never be as satisfactory as that following digital fracture.

We have tried to assess the relationship between physical signs and the tough valve. In pure stenosis this does not appear possible at the moment.

We believe that commissurotomy can be overdone and that the production of regurgitation is a real danger. On two occasions we have had cause to regret fracture of the medial commissure following upon successful fracture of the lateral commissure. Both these patients now have

well developed regurgitation. We are by no means certain that splitting of the medial commissure ought to be undertaken in all cases if the lateral split has been satisfactory.

We have never to date amputated an appendage—in fact, we make every effort to retain the appendage in the anticipation that its presence might facilitate a second valvotomy if such became necessary. Presence of the appendage does not appear to have influenced clotting, as there has been only one post-operative embolism.

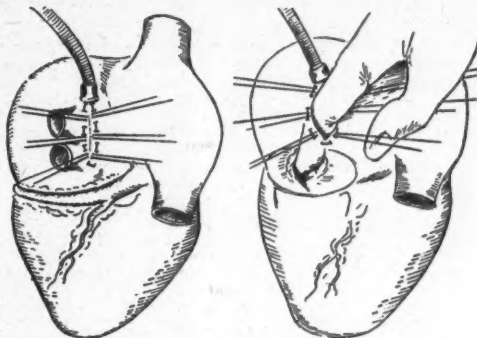


FIGURE V.

Illustrates the method of entry into the auricular cavity through a flat auricular wall. (Bailey and Neptune, 1954; reproduced by permission.)

Cardiac arrest and ventricular fibrillation have not really been problems. They were cause for concern in only one case.

The patient had a thrombosed auricle. After some particularly strenuous manipulation with a mitral knife, the heart suddenly went into ventricular fibrillation. A defibrillator was not available, cardiac massage was commenced, and procaine was given into the ventricle. After two minutes the heart resorted to normal rhythm. Fifteen minutes later the heart went into cardiac arrest. Further cardiac massage and the intraventricular administration of adrenaline this time restored normal rhythm in about one and a half minutes.

We have often noted a great drop in blood pressure immediately after intracardiac manipulation. Aortic compression has to date never failed to restore the *status quo*.

RESULTS.

The Value of a Small Increase in Size of the Mitral Orifice.

Figure VI is a chest X-ray film of the first patient upon whom we performed valvotomy, taken during one of her many attacks of acute pulmonary edema. As has already been stated, the valvotomy was more in the nature of a dilatation than a commissural fracture. Only a small increase in size of the mitral orifice was obtained. Nevertheless, in the succeeding four years the patient married, led a reasonably normal life and had only one tiny haemoptysis. The small increase in size of the orifice was enough to prevent the episodes of edema. During the fourth year she became increasingly dyspnoeic, and finally a second valvotomy was performed in May, 1955. Once the difficulties of approach had been overcome, a very satisfactory commissural fracture was obtained.

Improvement.

The results in the 50 surgical cases are summarized in Table I.

If we have been able to return the patient to his usual occupation and enable him to lead a completely normal life—the miner to the coal face, the schoolboy to playground battles, the tram conductress to the Bellevue Hill line at peak hour, the housewife to the bargain basement—we have classified the result as excellent. There were 22 of these.

If we have been able to return the patient to comfort, able to carry out the usual daily activities provided no

undue exertion was necessary, we have classified the result as good. There were 16 of these. In three of these cases the commissurotomy was considered unsatisfactory because of the relatively small increase obtained in the size of the mitral orifice. Yet in all three the clinical improvement was much better than expected. We have included in this group one patient in whom we produced regurgitation. Her improvement over a year has been maintained.

If we have been able to improve the patient's condition without being able to return him to a reasonably active life we have classified the result as fair. There were three of these.

The grade 4 patient in this group had a grossly diseased auricle, developed ventricular fibrillation and cardiac arrest during operation, and had a tough, resilient valve. Only a small increase in the size of the orifice was obtained. She was a music teacher, and whereas she had been bed-ridden for seven months, she was able to resume giving music lessons.

TABLE I.

Result.	Number of Subjects.	Pre-Operative Grade.
Excellent	22	Grade 2b (12) Grade 3 (8) Grade 4 (2)
Good	16	Grade 2b (7) Grade 3 (9) Grade 4 (0)
Fair	3	Grade 2b (0) Grade 3 (2) Grade 4 (1)
Poor	9	Grade 2b (2) Grade 3 (6) Grade 4 (1)
Death	0	
Total	50	

Failure.

If we have failed to improve a patient's condition we have classified the result as poor. There were nine of these.

The reasons for failure in these cases are summarized in Table II.

It will be noted that three cases in grade 2b were classified as failures. Despite this, the patients are all leading lives of moderate activity.

We hope, sometime in the future, when technical advances have solved the problem of the rubbery mitral ring, to tackle their valves a second time.

In grade 4 lie the greatest risks, but also the greatest rewards.

A man had been bed-ridden for five months. He had gross auricular disease with clot. Two months after valvotomy he walked from the University of Sydney to Circular Quay and back in the one morning, with not the slightest respiratory distress.

Mortality.

There were no deaths in the surgical series. At the present time all the patients upon whom we have operated are alive, though two patients (one in whom we failed to enter the auricle, and the other with predominant regurgitation) are leading very restricted lives.

Brock *et alii* (1952) had eight deaths in his first 50 cases, Sellors *et alii* (1953) five in his first 72, Glover *et alii* (1953) six in his first 47, and Bailey *et alii* (1950) four in his first 22.

We can only ascribe our good fortune in this respect to the work and writings of these pioneers who paved the way.

CONCLUSION.

The symptoms and signs in 104 cases of mitral stenosis have been elaborated.

Certain X-ray findings have been pointed out, in particular the significance of the straight left border of the heart.

The indications and contraindications for operation, particularly in childhood and pregnancy, have been considered.

The importance of pre-operative and post-operative management has been stressed and a brief description of operative procedures has been given.

Finally, the results in 50 patients treated by valvotomy have been discussed.

TABLE II.
Reasons for Failure in Nine Cases.

Reason for Failure.	Number of Cases.	Remarks.
Commissurotomy not performed.	4	(a) Gross calcification and regurgitation with inoperable valves—two cases. (b) Failure to enter the auricular cavity owing to thrombosis, fibrosis and calcification of the auricular wall in a grade 4 patient—one case. (c) A woman, aged fifty-seven years, whose condition after the chest was opened was too poor to allow the operation to proceed. She is alive and well two years later.
Commissurotomy unsatisfactory.	3	All three patients were in Grade 2b. They had rubbery, resilient cusps. We were able to make little impression, even with a mitral knife.
Regurgitation ..	1	After fracture of the lateral commissure all was well. The moment the medial commissure was fractured, regurgitation was noted. This patient has done badly.
Age and associated valve lesion.	1	The patient, a woman, aged fifty-one years, had mild aortic incompetence. She had a satisfactory commissurotomy, but in the six months following operation she was twice readmitted to hospital in congestive cardiac failure.

SUMMARY.

We have analysed 104 cases of mitral stenosis from the viewpoint of mitral valvotomy, with the following conclusions.

1. The predominant symptom was dyspnoea. We confined our surgical activities to patients in grades 2b, 3 and 4. Acute pulmonary oedema was considered an urgent indication for valvotomy.

2. We have correlated the relationship between systemic embolism and the occurrence of intraauricular clot in our cases.

3. In a discussion of the signs we have stressed the prematurely aged appearance, the mitral diastolic murmur, the opening snap, the heaving left ventricular type of apex beat in cases in which mitral incompetence is predominant, and the lifting impulse over the right ventricle in cases in which pulmonary hypertension is present.

4. We have pointed out the significance of the foregoing symptoms and signs in assessing the relative degrees of mitral stenosis and mitral incompetence.

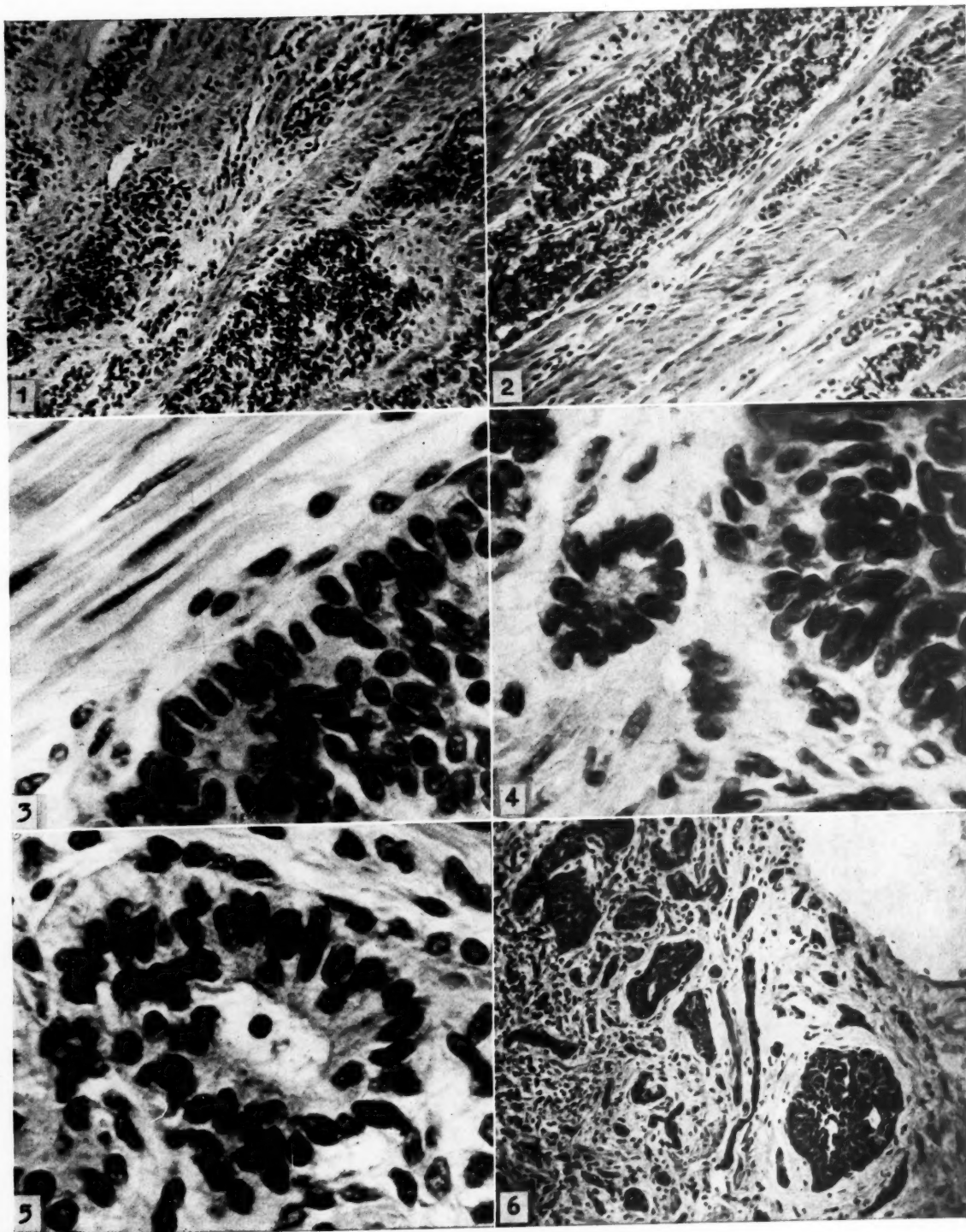
5. We have considered the significance of the *P mitrale* and the occurrence of right or left ventricular preponderance in the electrocardiogram.

6. In the X-ray film we have emphasized the configuration of the left cardiac border, the size of the pulmonary artery, the presence or absence of calcium and the size of the left ventricle.

7. The value of cardiac catheterization in cases in which there is doubt as to the severity of the lesion has been pointed out.

8. The foregoing clinical, radiological, electrocardiographic and cardiac catheter findings have been correlated in considering the selection of patients for operation.

ILLUSTRATIONS TO THE ARTICLE BY REGINALD WEBSTER AND ALAN WILLIAMS.



UNIVERSITY OF MICHIGAN

ILLUSTRATIONS TO THE ARTICLE BY GEORGE V. HALL AND HARRY M. WINDSOR.



FIGURE I.

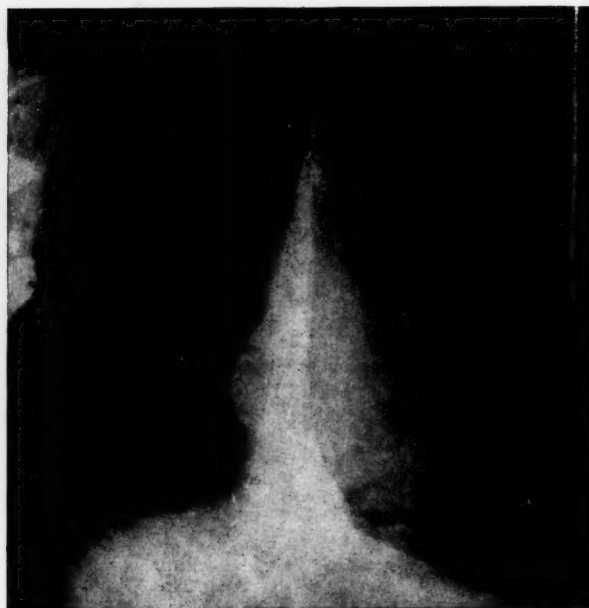


FIGURE II.

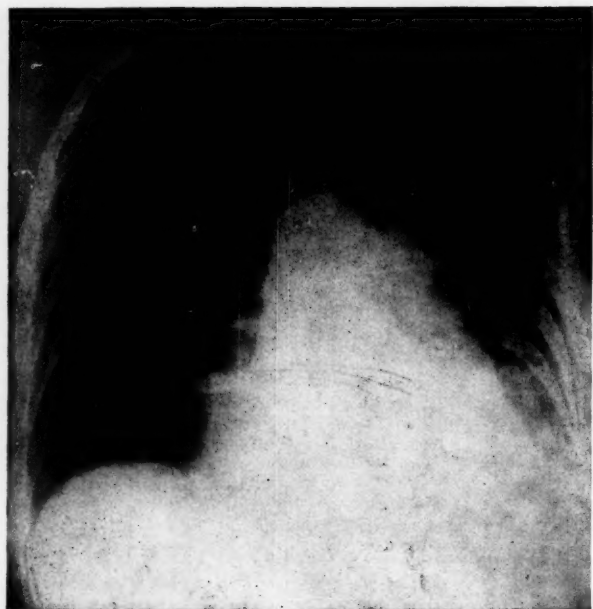


FIGURE III.

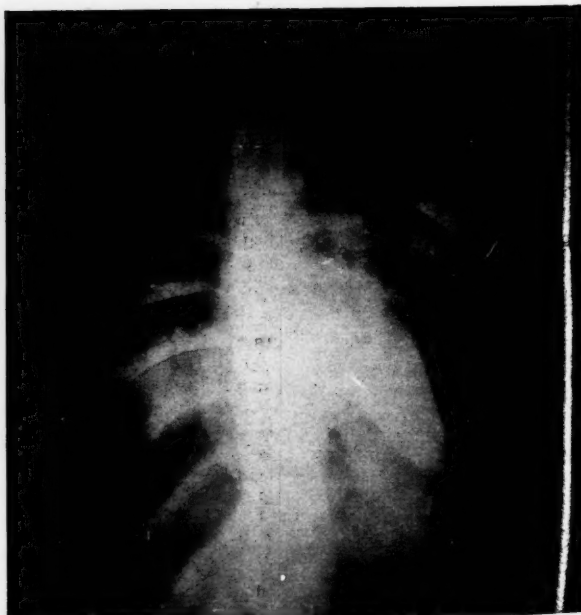


FIGURE VI.

9. The main contraindications to operation are active rheumatic infection and associated valve lesions of severe degree not amenable to operation.

10. We have briefly reviewed our experience of mitral valvotomy in pregnancy.

11. We believe that valvotomy has a definite place in childhood.

12. In pre-operative treatment full digitalis therapy is considered essential. The post-operative treatment, including the management of heart failure, arrhythmias and the post-commissurotomy syndrome, is equally important.

13. We have briefly described some operative aspects.

14. The operative results in 50 cases have been listed. The mortality was nil. In 38 of the cases most satisfactory results were achieved.

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ADDENDUM.

Since the submission of this paper for publication, a further 25 valvotomies have been performed without one death.

Legends to Illustrations.

FIGURE I.—Typical "mitral" heart. Double hump on the left cardiac border.

FIGURE II.—The straight left heart border in a patient who proved to have a fibrosed, thrombosed auricle.

FIGURE III.—Enormous dilatation of the pulmonary artery in a case of severe pulmonary hypertension.

FIGURE VI.—Acute pulmonary oedema in a girl, aged twenty-one years.

Reports of Cases.

ANTIBIOTIC-ATTENUATED CHRONIC STAPHYLOCOCCAL ABSCESS SIMULATING EARLY CARCINOMA IN THE LACTATING BREAST.

By THOMAS F. ROSE,

Honorary Surgeon, The Royal North Shore Hospital of Sydney

THOUGH the breast is a superficial organ, paradoxically its early lesions may be most difficult to diagnose clinically, especially when it is lactating. This is especially so now, when the medical profession and lay public are trained to regard seriously any swelling of the breast, no matter how short its history or how small its size. Any such swelling, even without the classical signs of very advanced cancer such as nipple retraction or skin dimpling, must be suspected of being carcinoma until proved otherwise, not by waiting and observation, but by immediate excision and biopsy, preferably by examination

of frozen sections. Unfortunately, of course, even the smallest palpable swelling if it is a carcinoma is actually in an advanced stage, as it has already broken beyond the bounds of the duct system and is analogous to a rectal carcinoma which has broken through the *fascia propria* of that organ.

Apart from carcinoma, a small, firm, deeply placed swelling in the female breast with no evidence of skin or nipple retraction or enlarged draining lymph nodes may be due to several conditions, all of which can perfectly mimic a carcinoma. Such conditions, excluding such rarities as a syphilitic gumma or a tuberculoma, may include lipogranuloma (fat necrosis) or a localized area of plasma-celled mastitis, or chronic inflammatory lesions of uncertain aetiology. This is why it is wrong to submit any patient to a radical mastectomy (surely still the correct treatment of a small carcinoma localized to the breast) without prior microscopic examination of a biopsy specimen.

On the other hand, an apparently cystic swelling may contain a carcinoma in its walls. This is the reason why all cysts should be excised and not merely aspirated, because such complicated cysts do not always contain blood-stained fluid.

It is the purpose of this communication to describe yet another lesion mimicking cancer of the breast which, I believe, is bound to occur more frequently in the future—namely, the antibiotic-attenuated chronic staphylococcal abscess of the lactating breast.

The antibiotics, apart from the miraculous effect they have worked on the face of medicine, have ushered in new pictures of old diseases never seen before their use. Apart from causing the complete resolution of an acute inflammatory process or converting it to a well-localized acute abscess, they may convert a frank acute infection into an insidious chronic one with its own morbidity and disability, which may trap the unwary diagnostician not yet fully acquainted with the antibiotic-attenuated disease processes.

Such a disease process afflicted the lactating breasts of three patients examined in the space of two months. The cases were almost identical in every respect. The patients were aged respectively twenty-three years (Case I), twenty-five years (Case II) and twenty-eight years (Case III). Each had had a healthy male child, born in Cases I and II, two months previously, and in Case III, three months previously. The mothers stated that none of the babies had had any apparent skin or umbilical lesion. Each mother had fed her child successfully and was still feeding him.

The history in each case was that the nipple of the right breast had been a little painful and had cracked shortly after the infant commenced suckling. This was immediately followed by a painful, tender thickening affecting the segment of the breast where the swelling was later found. The skin overlying this area became reddened. This acute mastitis quickly subsided, in each instance within two or three days, with antibiotic treatment given over one week. In Case I penicillin and "Aureomycin" were used, whereas in the other two cases "Terramycin" alone was given by mouth. Suckling did not need to be discontinued in any instance.

Nothing untoward then happened until a month later in Case I and three months later in the other two cases, when there was noticed a painless swelling in the upper outer quadrant of the right breast in Cases I and III and in the upper inner quadrant of the right breast in Case II. Each patient consulted her doctor within a few days of finding the swelling, and each was referred immediately for surgical attention with the provisional diagnosis of probable carcinoma.

Examination in each case disclosed a hard, fairly well-encapsulated swelling deep in the segment of the breast, which, on close questioning, was admitted by the patient to have been the site of the previous now almost forgotten mastitis. The swelling was mobile, and there was no nipple or skin retraction. In Case II some anterior axillary

lymph nodes were palpable; these were firm and non-tender, though smooth and mobile.

Clinically each swelling accurately mimicked early carcinoma, so much so that it was decided that it should be widely excised and examined. This was done under general anaesthesia. In each instance a chronic thick-walled rounded abscess was found containing thick yellow pus. Microscopic examination of the abscess wall revealed an inflammatory condition with much small cell infiltration, mostly lymphocytes, but plasma cells and polymorphonuclear cells and even giant cells were present. Culture of the pus in each case produced a hemolytic coagulase-positive *Staphylococcus aureus*. Antibiotic sensitivity tests showed this organism to be insensitive to penicillin, but sensitive to "Chloromycetin" and the "mycins".

In Case I the breast incision was sutured, but in spite of the systemic exhibition of "Terramycin", the wound broke down due to a similar staphylococcal infection and eventually healed by second intention. In Cases II and III the wound was left unsutured and healed much more quickly, without any sign of further infection after the abscess ceased to drain.

Discussion.

It is thought that this antibiotic-attenuated lesion must now sufficiently often be seen, after the apparently successful treatment of staphylococcal mastitis of lactation, to be included in the differential diagnosis of a swelling occurring in the lactating breast.

After mild acute mastitis of the puerperium has been apparently treated with complete resolution by the antibiotics, even those to which the organism is subsequently shown to be sensitive, a chronic, painless, well-localized abscess develops, which does not become apparent to the patient until some two or three months later, when, in fact, the patient may remember the prior inflammatory episode only on being closely questioned. The abscess closely mimics a carcinoma.

On excision, the swelling is found to be a chronic, thick-walled abscess due to a hemolytic, coagulase-positive *Staph. aureus*, insensitive to penicillin, but sensitive to the "mycin" group of antibiotics and to "Chloromycetin".

However, even though the abscesses are well encapsulated, there must be organisms lurking in the surrounding tissues, because in Case I, after wide excision of the unopened abscess, the sutured wound broke down from infection with a similar organism.

Summary.

Three cases of antibiotic-attenuated chronic staphylococcal abscess following acute puerperal mastitis apparently successfully treated by the appropriate antibiotic are described. These abscesses accurately mimicked carcinoma, so that they were widely excised for a biopsy. Examination and culture revealed the true nature of the lesions.

Reviews.

The Year Book of Pathology and Clinical Pathology (1955-1956 Year Book Series). Edited by William B. Wartman, B.S., M.D.; 1956. Chicago: The Year Book Publishers, Inc. 7½" x 5", pp. 480, with illustrations. Price: \$6.50.

THE editor of the 1955-1956 year book of pathology and clinical pathology, William B. Wartman, has introduced an innovation into his introduction—he has devoted it to an interesting description of how a year book is made. At the end, in a footnote, he calls attention to the present growing custom of printing summaries of scientific papers in Interlingua, which he says is easy to read but hard to write. He remarks that a simple international language based on English had been invented some years previously by C. K. Ogden, of Oxford, and I. N. Richards, of Harvard—Basic English, easy to read and also to write. To give point to his comment, Dr. Wartman states that his introduction

has been written in Basic English, with only a few minor alterations. The next article, by J. Willis Hurst, is a special article entitled "C.P. Seamanship", reprinted from the *Harvard Medical Alumni Bulletin* of October, 1955; it describes, in the manner of Stephen Potter, how the clinician may be "one up" on the pathologists at clinico-pathological conferences. It will be appreciated that this serious work opens in an unusually cheery way.

The first section of the book, that on pathology, is divided into the following subsections: general pathology, syndromes, cardio-vascular system, hemopoietic system, respiratory system, alimentary system, the liver, the pancreas, urinary and male genital systems, female genital system and breast, endocrine glands, musculo-skeletal system and skin, and the nervous system. The section on clinical pathology comprises the following subsections: hematology, clinical chemistry, clinical microbiology, and urine and cerebro-spinal fluid. There are two special articles, one entitled "Pulmonary Collateral Circulation: Functional Implications and Some Therapeutic Applications", by Averill A. Liebow, and the other "The Estimation of Hemoglobin", by George F. Stevenson.

This year book fulfils the useful function of its predecessors—it provides a common meeting ground for the largely clinical and the chiefly scientific in pathology.

Current Therapy, 1956: Latest Approved Methods of Treatment for the Practising Physician. Edited by Howard F. Conn, M.D. Philadelphia and London: W. B. Saunders Company. Melbourne: W. Ramsay (Surgical), Limited. 8" x 10½", pp. 662. Price: £5 10s.

THIS annual publication is now in its eighth edition. Dr. Howard F. Conn, a physician, has been the editor from the beginning. He has a panel of consulting editors to help him. There is a very large number of contributors. Each succinctly presents his treatment of the condition which he has been selected to discuss. As pointed out in previous reviews, the book has many good features. The double-column type is large and clear. In this edition powerful drugs, in general, seem to be advised with a better explanation of their dangers than was occasionally noticeable before.

What not long ago was tentative has now, in the opinion of some contributors, become standard treatment. In this regard it is interesting to read the views upon syphilis, especially neurosyphilis, in which penicillin alone, or rarely a cycline drug, is advised; upon meningitis, in all forms of which intrathecal therapy has been abandoned; and upon hypopituitarism and pituitary failure, which are discussed by Sheehan, whose work is so well known. Much of the treatment is, of course, orthodox, but it is none the less satisfying to see it so clearly set out by acknowledged authorities, for example, by Wintrobe, who writes on some blood diseases.

The book's main value seems to lie in the section upon medical treatment, and, for quick reference, this is excellent. Published separately, it would make a handy and helpful volume. As it is the book is bulky and much in the sections upon treatment in other branches, especially surgery, is less useful. It is difficult, in fact, to see for whom the surgical part is designed. That upon treatment in dermatology might well pass muster, but the expert might think the one upon obstetrics and gynecology would not.

The Treatment of Renal Failure: Therapeutic Principles in the Management of Acute and Chronic Uremia. By John P. Merrill, M.D.; 1955. New York: Grune and Stratton. 8½" x 5½", pp. 252, with illustrations. Price: \$6.75.

THE treatment of acute and chronic renal failure must be based on a sound understanding of the alterations in normal renal function occurring in various disease states, and on a clear clinical appreciation of the status of the patient in relation to the natural history of his disease. While modern medicine has little more to offer the sufferer from chronic renal disease from the standpoint of a cure than Richard Bright had in 1836, it can and does offer a considerably better system of management which can both defer decompensation and in some cases restore the sufferer to reasonable health. This is accomplished by the marriage of laboratory and clinical methods in a working partnership in which neither neglects the disciplines of the other.

Dr. Merrill has based his monograph on experience at the Peter Bent Brigham Hospital in Boston both in the wards and in the laboratory and clinic of the cardio-renal service. He has been able to evaluate the relative merits of

conservative and more radical methods of management of patients whose chemical physiology has been grossly affected by renal disease. In general he favours conservative measures for most cases, but sets out clearly the indications for and technique of the use of the artificial kidney. In an evaluation of the experimental work done by his service on transplantation of the human kidney in 10 patients he states that at this stage of investigation the procedure is not justified as treatment of renal failure. The main reason for lack of success lies in the field of tissue immunity.

The earlier part of the book gives a well-written review of the current concepts of renal physiology and pathology. Inevitably much emphasis is placed on biochemistry, as an alteration in the chemical state of the patient is the main contribution made by the clinician in his management of renal failure. Merrill points out that while it is possible in a normal kidney to demonstrate the role of tubular or glomerular activity, advanced renal disease presents a complex problem in which total function is the sum of the individual function of the surviving nephrons. These surviving nephrons will have sustained varying degrees of glomerular and/or tubular damage together with changes in function based on hypertensive and congestive circulatory complications. Add to this interstitial fibrosis and ischaemic scarring and one has the situation normally confronting the physician at the bedside. At this stage the problem is one of clinical investigation rather than the application of experimental physiology.

The chapters on the management of acute and chronic renal failure are clearly written and are of great practical value. The diagrams and figures are lucid and contribute to a clearer understanding of the text. In the appendix are set out a description of the technique of short-term continuous peritoneal dialysis, a case history illustrating the management of dehydration with incipient renal failure, and a controlled salt and protein diet chart.

The monograph is commended to all who have responsibilities in the management of patients with renal disease.

Ten Patients and an Almoner. By Flora Beck; 1956. London: George Allen and Unwin, Limited. 7½" x 5", pp. 159. Price: 12s. 6d.

This book tells of the work of an almoner. The foreword, by Professor L. J. Witts, draws attention to the rise of this new and important profession and suggests that the book may well be provocative.

In relating the stories of ten patients, representative of different groups in society, Miss Best has outlined the social difficulties created in each case by the illness of the patient and their effect on the illness itself. The stories are told with insight and understanding, and will be of interest and value not only to those engaged in medical social work and to those who contemplate the work of an almoner as a career, but also to the general reader.

In the final chapter there is a discussion on the place of the almoner in the treatment of the sick, particularly in relation to a national health service. The author emphasizes the importance of cooperation between doctor and almoner and urges the inclusion of the almoner in the medical team. In entering this field, Miss Best leaves the general reader behind, and her argument loses clarity and force by the very nature of the book in which she has chosen to propound it.

A Handbook of Medical Hypnosis: An Introduction for Practitioners and Students. By Gordon Ambrose, L.M.S.S.A., and George Newbold, M.B., B.S., M.R.C.S., M.M.S.A., D.R.C.O.G., D.C.H., with forewords by William Moodie, M.D., F.R.C.P., D.P.M., and William S. Kroger, M.D.; 1956. London: Baillière, Tindall and Cox. 8½" x 5½", pp. 268. Price: 21s.

In this book psychiatrist Gordon Ambrose and gynaecologist George Newbold deal with hypnosis on broad lines. There is a double-barrelled foreword by Dr. William Moodie and Professor W. S. Kroger, who point out the merits of hypnosis in dispersing ubiquitous tensions and anxieties which accompany so many disorders, and its particular application to the fields of gynaecology and obstetrics.

After a brief history of medical hypnosis the authors discuss legal implications. In view of medico-legal risks the advice is timely. A hypnotist must maintain a high standard of integrity and for female patients employ a chaperone. In some cases the use of a tape recorder to record sessions is recommended. The clauses of the *Hypnotism Act of 1952* are given in an appendix and have a

bearing on public exhibitions of hypnosis in Australia. It is prohibited to hypnotize in public any person below the age of twenty-one years.

Notwithstanding the practical difficulties underlying hypnotic therapy, the authors believe that it will prove a valuable part of medical practice. A section is devoted to theories of the hypnotic state and methods for its induction.

In fairness to the authors it must be stated that they regard hypnosis not as a magic cure-all, but largely as a cushioner of stress and shock. It must be conceded that many discomforts noted in disease are psychological accompaniments. As an example the peptic ulcer patient is relieved by learning the art of relaxation. This can be quickly taught through the practice of auto-hypnosis.

The use of hypnosis in the neuroses is dealt with under the headings of anxiety, hysteria, mild depressions and obsessions. Cases are described in which beneficial results have been achieved.

The authors consider hypnosis the safest anaesthesia for use in minor surgery and paediatricians are advised to use hypnosis freely, as almost 100% of children can be hypnotized. Hypnosis in gynaecology is discussed in the light of the importance of emotional factors in all its branches. Hypnotism is stated to be of assistance to the general practitioner not merely to remove symptoms, but through hypnoanalysis to give a clearer appreciation of the underlying problems. For the obstetrician hypnosis is claimed to place a vehicle in his hands for ante-natal training in relaxation and in cooperation in painless delivery. The concluding chapter concerns the use of hypnosis in dermatology, a field closely linked with emotional problems.

The recent renewal of interest in the possibilities underlying hypnotherapy calls for a readable handbook on the subject. This modest and well-written work will go far to fill the need, so is recommended for both student and practitioner.

Progress in Clinical Obstetrics and Gynaecology. By T. L. T. Lewis, M.B., B.Chir. (Camb.), F.R.C.S. (Eng.), M.R.C.O.G.; 1956. London: J. and A. Churchill, Limited. 9" x 6", pp. 602, with 90 illustrations. Price: 55s.

In his preface to this book, T. L. T. Lewis states that his aim in writing it is to give an account of recent developments in clinical obstetrics and gynaecology. This aim he has undoubtedly achieved in a clear, concise style.

The book is an up-to-date survey of the literature on many obstetric and gynaecological problems; as such it is excellent for any specialist or candidate studying for a higher degree in these subjects.

Any criticism of the subject matter would be that the author draws somewhat lightly on his own experience and mainly on recent literature. Unfortunately the chapter on pregnancy and diabetes does not mention the result of the Medical Research Council's experiment on the value of hormones in pregnancy of diabetic subjects.

The Rhesus factor is very lucidly dealt with and the chapter is a pleasure to read, as is also the discussion on rubella and pregnancy.

In regard to fibrinogenemia, many obstetricians would not agree with the author's statement that artificial rupture of the membranes in concealed accidental haemorrhage serves only to aggravate the shock, and therefore is contraindicated unless the cervix is dilating. The author maintains that more blood takes the place of the escaping liquor when the intra-uterine pressure is reduced by the escaping liquor, but neglects the fact that labour almost invariably follows this procedure.

The subject badly treated in this book is sterility. In a volume entitled "Progress" the author is twenty-five years behind the times, and has ignored all modern trends. Culdoscopy and X-ray therapy for anovulation are not even mentioned.

The author states that in his opinion seminal analysis is hardly worth doing; firstly, because there is no general agreement as to what constitutes a normal specimen of semen, and secondly, there is virtually nothing that can be done to improve it should the semen count be found to be below standard. Surely if all clinics adopted this attitude the result would be that no advances would be made in the treatment of male infertility. Semen analysis also helps to sort out the couples whose treatment will be of no avail.

The author quotes Rubin (1947) and de Boer (1954) in condemning iodized oil for salpingography as it may cause a granulomatous reaction, which surely must be rare.

Basal body temperature charts the author condemns because failure to ovulate is an uncommon cause of infertility, and since there is no treatment which can make a woman ovulate. Many investigators of sterility would disagree, and X-ray therapy has recently been reported as successful in establishing ovulation in as high as 80% of cases.

The author concludes that dilatation of the cervix, insufflation of the tubes and endometrial biopsy are probably the only worthwhile sterility investigations.

The book contains well-written chapters on carcinoma of the cervix, intraepithelial carcinoma of the cervix and carcinoma of the ovary. There is also a short chapter on vaginal cytology.

To sum up, the author is to be congratulated on a very well-written concise book. It is for the specialist, for the candidate for the M.R.C.O.G. examination, and for the advanced general practitioner who wants a post-graduate course in the most recent and approved methods of diagnosis and treatment in this subject. It should be on the shelves of every practising specialist.

A Manual of Obstetrics. By the late O'Donel Browne, M.B., M.A.O., M.A., Litt.D., F.R.C.P.I., F.R.C.O.G., edited and largely rewritten by J. G. Gallagher, M.D., M.A.O., F.R.C.P.I.; 1956. Bristol: John Wright and Sons, Limited. 9" x 5½", pp. 274, with 205 illustrations. Price: 37s. 6d.

The late Professor O'Donel Browne, one-time Master of the Rotunda Hospital, Dublin, was universally recognized as a fine teacher of obstetrics as well as a first-class clinician. It is not surprising, therefore, that one of his colleagues, Dr. J. G. Gallagher, should seek to keep in publication the excellent "Manual of Practical Obstetrics", of which the first edition was produced by O'Donel Browne in 1926.

This is essentially a student's book, and as such, and because of its relatively low price, it may well appeal to students who wish to go beyond their prescribed text-books for their reading. For the Australian obstetrician and general practitioner there are now available a number of excellent books dealing with practical obstetrics at the post-graduate level.

If we have regard then to the purpose for which this book was written, we can find nothing but praise for its clarity and sensible approach to the subject. The author has ensured that the students will have a ready appreciation of the normal before passing on to the complications of pregnancy, labour and the puerperium.

Dr. Gallagher thoroughly justifies the claim that this book has been brought up to date; thus information may be found on such subjects as hypofibrinogenemia as an occasional factor in severe obstetrical hemorrhage, of the use of soft tissue radiography in *placenta praevia* and of the newer antibiotics. Reference is made to the place of "Pitocin drip", of dihydroergotamine and of hypotensive drugs.

The section on pregnancy toxæmia is well written, and the importance of liver damage, as well as of renal complications in these conditions, is rightly stressed. As might be expected, the description of the treatment of eclampsia favours those methods evolved in Dublin, such as the control of convulsions by the intravenous drip administration of fluid containing sodium thiopentone. It is interesting to note that the author still uses intravenous hypertonic dextrose therapy freely in toxæmic cases with oliguria.

There is apparently a reluctance to use the new classification of disordered uterine action except by passing reference.

The potential complications of grand multiparity are well emphasized.

In these days of expensive text-books, even in the undergraduate field, this volume is undoubtedly good value.

Chest X-Ray Diagnosis. By Max Ritvo, M.D.; Second Edition; 1956. Philadelphia: Lea and Febiger. Sydney: Angus and Robertson, Limited. 10" x 7", pp. 640, with 427 illustrations. Price: £8 16s.

It is four years since the previous edition of this book was published and the significant advances in radiography of the lungs and cardio-vascular system have called for this second edition. The author advises a preliminary fluoroscopy in all cases; this makes it possible to decide what special views should be taken in addition to the routine postero-anterior and lateral films. Stereoscopic postero-anterior films are advised in all cases. After a full descrip-

tion of the normal chest, consideration is given to the pneumonias and other inflammatory conditions. The text and illustrations are excellent. Friedländer's and virus pneumonias receive special attention. Atelectases, both congenital and acquired, are dealt with exhaustively. In the section on lung abscess, a lateral view shows the fluid level and allows of exact localization of the lesion; fluoroscopy is also of value in localization. The diagnosis of tuberculous cavities, cysts and pneumothorax is at times difficult. The section on bronchiectasis provides interesting information. Excellent illustrations of tuberculosis and sarcoidosis are included in the discussion of these conditions. Pneumonokoniosis is dealt with in a concise manner and a useful chart tabulates the points in the diagnosis. Considerable space is devoted to cystic disease and pulmonary neoplasms with a discussion on the use of "Lipiodol" in diagnosis.

The mediastinum and the diaphragm, together with diaphragmatic hernia, are dealt with in a lucid manner and the methods of examination detailed.

Section VII deals with the cardio-vascular system and details of technique are given. Very fast exposures of high kilovoltage are recommended and charts are supplied of heart measurements. Kymography is of value in the study of movements of the different chambers of the heart. The author thinks highly of this method. The author details the advances in cardiography and reports his technique. The left oblique view is used in studying the aorta. Higher exposures than usual are recommended. Practically every known lesion is described and illustrated; particular attention is given to congenital conditions. This is a wonderfully interesting and authoritative work and is easy reading. It is full of information and can be highly recommended to both physicians and radiologists.

Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"Textbook of Urology", by Victor F. Marshall, M.D., F.A.C.S.; 1956. New York: Paul B. Hoeber, Incorporated. 9½" x 6½", pp. 280, with illustrations. Price: \$5.50.

The book is intended to provide a sound, and somewhat broad, first step in urology.

"Epilepsy and the Law", by Roscoe L. Barrow and Howard D. Fabing, M.D.; 1956. New York: Paul B. Hoeber, Incorporated. 8½" x 5½", pp. 190. Price: \$5.50.

The subtitle of the book reads: "A Proposal for Legal Reform in the Light of Medical Progress."

"Gynecologic Cancer", by James A. Corscaden, Ph.B., M.D.; Second Edition; 1956. London: Baillière, Tindall and Cox, Limited. 9" x 6", pp. 556, with illustrations. Price: 80s.

Already received from an American publisher and from Angus and Robertson, Limited.

"The Training of Sanitary Engineers: Schools and Programmes in Europe and in the United States", by Milivoj Petrik, Ing., M.S.; Monograph Series, No. 32; 1956. Geneva: World Health Organization. 9½" x 6½", pp. 151. Price: \$4.00.

Information obtained by the author in preparation for a symposium on the subject held by the World Health Organization.

"Psychoanalysis of Behavior", by Sandor Rado, M.D., D.P.Sc.; 1956. New York: Grune and Stratton, Incorporated. 9½" x 6", pp. 394, with illustrations. Price: \$7.75.

A collection of the author's papers published in scientific periodicals and books from 1922 to 1956.

"Alcoholism as a Medical Problem", edited by H. D. Kruse, M.D.; 1956. New York: Paul B. Hoeber, Incorporated. 9½" x 6½", pp. 102. Price: \$3.00.

The proceedings of a conference held under the auspices of the Committee on Public Health of the New York Academy of Medicine and the New York State Mental Commission.

The Medical Journal of Australia

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All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given: surname of author, initials of author, year, full title of article, name of journal, volume, number of first page of the article. The abbreviations used for the titles of journals are those adopted by the Quarterly Cumulative Index Medicus. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

CONFINEMENTS AT HOME AND ABROAD.

THE general world trend for a good many years now has been towards conducting confinements in hospitals. Such an experienced obstetrician as J. P. Greenhill¹ considers that the ideal situation in any country would be for all babies to be born in well-equipped hospitals with well-trained obstetricians in charge. However, he continues, since this idea is Utopian, there will always be women who have their babies at home, particularly in countries where there are well-trained midwives. He quotes with approval a report on extensive experience in domiciliary obstetrics by an English general practitioner, Ivor Cookson,² and remarks that even in home deliveries, conscientious midwives and physicians can obtain results as good as those obtained in most general hospitals throughout the world. The preference shown by the majority of medical attendants and patients for having the confinement take place in hospital is, of course, easily understood. Two important objections to confinement in the home have been stated by Professor Bruce Mayes:³ (a) the risk of unexpected complications, in the management of which hospital facilities may mean the difference between life and death; (b) the depriving of the mother of the desirable rest from domestic cares which she would obtain in hospital. In addition, from the doctor's viewpoint there are considerable advantages in supervision, readily available facilities

and saving of time. On the other hand, there are disadvantages in the hospital confinement. Cross-infection is one not to be lightly thrust aside. Another, to which Professor Mayes refers, is in the abnormal surroundings of the hospital atmosphere and the proximity of other patients, some of whom may suffer from complications. He cites "the danger of an expectant mother being regarded as a 'patient'"—a situation similarly appreciated in their 1953 review by the General Practice Review Committee of the British Medical Association,¹ who wrote of "an event which should be a natural physiological process supervised by the family doctor" taking on the aspect of "a major illness requiring the care of a special department". Despite these factors, most people will agree with Professor Mayes that the advantages favour the hospital, and indeed home confinements are rare in Australia. This last-mentioned fact was emphasized, in a flattering reference by Professor A. M. Claye, of Leeds, who is quoted by yet another professor of obstetrics and gynaecology, C. S. Russell,² of Sheffield, as declaring that "domiciliary delivery deserves to be as dead as the Dodo . . . and already it is in that desirable condition in two of the more civilised countries in the world". He was speaking of Australia and New Zealand.

Bound up with the question of where the confinement should be conducted is that of who should conduct it, the general practitioner or the obstetrician. The confidence of the general public in the specialist is neatly brought out in Professor Russell's story of the young woman who, when asked the question, "With whom would you like to be wrecked on a desert island?", replied, "An obstetrician." At the same time the General Practice Review Committee of the British Medical Association commendably held firmly to the opinion that midwifery was an integral part of general practice and that every possible encouragement should be given to general practitioners to undertake it. They pointed out that the coming of a new baby was an important event in the family, and the family doctor should be closely concerned with it. Moreover, many long-established doctors had found midwifery to be the most satisfying part of their experience. They believed that, generally speaking, a general practitioner who did good midwifery made a better all-round doctor than one who did none. These views will receive wide support in this country, where clearly a larger proportion of midwifery is carried on by general practitioners than in Great Britain, despite the fact that most women go into hospital for their confinements. Presumably this is related in part to the greater availability of hospital beds to Australian general practitioners, particularly in country areas, and in part to the major role played by the midwives in Great Britain. The position of availability of beds in England was referred to by the General Practice Review Committee, who expressed the view that if the confinement must take place in an institution and the woman would like to be attended by her own doctor, there should be a number of beds available for that purpose, although the beds need not be in general hospitals or carry the full established staff of a specialist maternity unit—the midwife who would have attended in the home would attend the patient in such a unit. A more detailed description of a unit of

¹ "The Year Book of Obstetrics and Gynecology (1954-1955 Year Book Series)", 147.

² *Brit. M. J.*, April 10, 1954.

³ "A Textbook of Obstetrics", 1950, 268.

¹ *Brit. M. J.*, Supplement, September 26, 1953.

² *Lancet*, May 12, 1956.

this kind is given by Joseph Sluglett and Sarah Walker,¹ who are respectively a general practitioner and the senior medical officer of the Maternal and Child Welfare Service in Bristol. Their plan is designed to ensure that those concerned with the welfare of the mother—the family doctor, the midwife and, when necessary, the obstetric consultant—will supervise her during her labour. The plan would require a block of labour wards attached to a maternity hospital. Each would consist of a suitably heated room with simple equipment such as would be found in a good household which has been prepared for a confinement. Except for preparing and cleaning the room, no extra staff would be needed. When the woman went into labour, she would inform the district midwife, who would arrange for her admission to the labour ward and would accompany her there. The patient would not be left by herself at any time during her labour. Her own doctor would be informed at once and, with the midwife, would be responsible for the conduct of the confinement. When the mother had been safely delivered and had recovered from the effects of her labour, she would be taken home by ambulance with her baby, accompanied by the midwife. This plan, which is, of course, primarily related to English conditions, does at least offer some reconciliation of the opposing advantages and disadvantages of home and hospital confinements in such matters as the continued care of the family doctor, the availability of specialist aid and hospital facilities in an emergency, reduction in risk of cross-infection, saving of public money and ensuring that the mothers go home early. On the last-mentioned point, Sluglett and Walker "feel sure" that the mothers "would be glad to go home so soon", as "most mothers in hospital begin to fret after the first few days"; Professor Mayes would undoubtedly differ from them on this point. In general the idea has a good deal to commend it. It is not entirely appropriate to the Australian scene, but something like it may become acceptable in view of, first, the increasing difficulty in providing and maintaining sufficient hospital beds, second, the decline of private hospitals, and, third, the impracticability of keeping open to all practitioners personal use of the facilities of a public hospital, when a large number are practising in the area.

A concluding word might be said about the specialist obstetrician. His role is vital as a consultant, and many women still prefer to have his services for what they feel is the best care throughout their confinement. This is all quite fair; although the good points of having a sound general practitioner obstetrician are not to be denied. The point which apparently worries Professor Russell in England is that all general practitioners are not as experienced and competent as they might be. He is opposed to "dabbling in midwifery" and comments: "I would like to push out of domiciliary midwifery those who are afraid of it, for they have no courage, and those who are not afraid of it, for they have no imagination; those who say there is nothing to it, and are prepared to go and do a case now and then, just to keep their hand in, for they have no understanding; and those who have no interest—for they have no soul." His solution is "supervision, maybe even control, . . . in the hands of the consultants, or at least doctors who have the necessary

experience to advise on obstetric matters" and a sort of aristocracy of general practitioner obstetricians. This may be desirable in England—we can only take the word of Professor Russell, who is presumably one of those to whom he refers as having experience of "the frightful effects of bad midwifery". It would not be readily tolerated by the profession in Australia; nor would it be practicable in terms of geography or professional organization. Moreover, we may confidently suggest that the standard of obstetrical teaching in this country is such as to make it unnecessary.

Current Comment.

RECURRENT VARICOSE VEINS.

THERE is considerable divergence of opinion amongst surgeons experienced in the treatment of vascular disorders on the correct treatment which should be applied to patients with varicosities of the lower limb. New radiological techniques have yielded much valuable, and at times surprising, information on the complexities of the venous network, on the importance of muscular activity, and of the valves in the venous circulation, and upon the importance of deep veins in the aetiology of abnormalities of superficial veins. Techniques applied to segments of varicose veins, without reference to the efficiency of the deep circulation, have necessarily produced some poor results. It is apparent that the assessment of the degree and extent of venous abnormality is by no means simple, and considerable experience is required in the application of the treatment most likely to alleviate the signs and symptoms of the abnormal venous drainage, and to avoid a recurrence of the condition. The many treatments devised for varicose veins have tended to become isolated into three types, and auxiliary procedures, such as sympathectomy, are not commonly applied. The first type of treatment consists in the prevention of further venous deformity and in the establishment of a healthy venous drainage by conservative measures. The workers who have applied to conservative treatment sound principles, aided by education of the cooperative patient, have in mild and early cases obtained good results without the need for surgical interference or for restriction of the activity of the patient. The second and most widely used method of treating varicose veins is by obliteration of the lumen of segments of the affected vein by the injection of sclerosing agents, or by the ligation of the vessel. Such workers as F. B. Cockett and D. E. E. Jones² have emphasized the importance of incompetent perforating veins in the leg in the aetiology of varicose veins in that region. They suggest that the perforating vein should be excised if treatment designed to obliterate any incompetent veins of the great saphenous system has failed to effect a cure. The vein most commonly causing trouble in this connexion is the middle one of the three perforating veins above the internal malleolus. Surgical treatment of varicose veins cannot be expected directly to improve a defect which is primarily in the deep veins, though, as T. T. Myer and J. C. Cooley³ have shown, removal of incompetent superficial veins does in fact reduce the venous stasis in the affected limb. In the management of the original causes of superficial varicose veins it was found by J. R. Robinson and C. A. Moyer⁴ that after ligation and division of the common femoral vein, varicosities and related sequelae resulted eventually in three-fourths of the cases, while the ligation and division of the superficial femoral vein had the same adverse results in only 10% of the cases.

The treatment of varicose veins by the injection of sclerosing substances alone is not without dangers, and

¹ *Lancet*, May 12, 1956.

² *Lancet*, January 3, 1953.

³ *Surg., Gynec. & Obst.*, December, 1954.

⁴ *Surgery*, May, 1954.

the relative simplicity and the good results obtained by the ligation of affected veins have led to loss of enthusiasm for the unpredictable sclerosing techniques. In some large medical centres the injection of sclerosing substances as the major part of therapy is no longer carried out. Now even the well-tried techniques of ligation are giving way to the comparatively heroic procedures of stripping of the entire length of the affected vein by "pull through" methods from incisions at intervals over the line of the vein. T. T. Myers and L. R. Smith¹ have stripped the long saphenous vein from the dorsum of the foot to the knee or to the groin in a large number of cases, and have combined this with the sclerosing injection of remaining distal segments of veins. The short saphenous vein was also treated by stripping out in a large group of patients. In the cases in which stripping was incomplete there was a recurrence rate of 19.3%; when the stripping was complete the recurrence rate was only 2%. The radical stripping operation was particularly satisfactory in patients with deep venous insufficiency. In a later paper Myers² stated that stripping was used in all patients treated by surgical means for varicose veins at the Mayo Clinic since 1951. Latterly, the procedures have been increasingly radical, and Myers suggests that all so-called recurrences are really persistences attributable to insufficiency of the original operation. This is demonstrated by the finding that veins in which sclerosis has previously been performed are rarely completely solid and closed. Only stripping can prevent the reformation of the superficial venous system. Perforating veins are an important cause of recurrences when incompetent, and they should be ligated. The varicosities will recur if the sapheno-femoral junction is not explored and if all venous tributaries in this area are not ligated.

J. L. Luke³ also states that persistent or new incompetent communicating veins are the greatest single cause of the recurrence of varicose veins after operation. Luke described a new technique for reexploration of the important sapheno-femoral junction and suggested that stripping was still the method of choice, even in veins which had previously undergone artificial sclerosis.

K. A. Lofgren, T. T. Myers and W. D. Webb⁴ have reviewed the cause of recurrence or persistence of varicosities in the lower extremity following all types of treatment. They found that the outstanding characteristics of the so-called recurrent varicose veins were incompetency of superficial veins below the thigh, leg and foot, incompetency of perforating veins, and inadequacy of ligation above at the sapheno-femoral or sapheno-popliteal junctions. Even after widespread sclerosing procedures, recanalization took place rapidly in superficial veins and extended upwards in the main saphenous channel in effectively ligated veins, and also downwards from the groin if ligation was ineffective. Sclerosing procedures failed to deal with incompetent communicating veins, particularly when deep drainage was impaired. The importance of these perforating veins is increasingly recognized. After inadequate ligation at the sapheno-femoral junction, an effective collateral circulation is soon established. The competent long saphenous vein and an accessory saphenous vein were missed in many of the inadequate ligations, possibly because of unwillingness to enlarge the original incision. Even so, in many instances the gap in a correctly ligated saphenous vein was found to be bridged by new vessels when the saphenous channel was left in the thigh. The pattern of superficial veins is very variable, so that each operation is an individual one. In case of recurrence the groin should always be reexplored and all tributaries of the saphenous stump should be dissected out widely and ligated individually. At times an extraluminal stripper must be used and incompetent perforators are given special attention. Remaining small veins are sclerosed, though, as recanalization is inevitable, the adequacy of the operation may be judged by the limited

number of veins remaining to need such treatment. The patient must be seen subsequently at least every other year. As Lofgren *et alii* point out, thorough eradication of all the incompetent veins is the most effective preventive measure against recurrence.

CHOPIN.

In the past decade there has been a considerable advance in the knowledge of tuberculosis, especially on the therapeutic side. Two important aspects have yet to be cleared, the date of infection in a given case and the time of clinical onset. In regard to the former it is not unreasonable to suppose that infection is much more likely to be in the nature of a continuous bombardment than an isolated incident. In the case of the latter we may ask what patient will ever be able to name the day on which he first felt slightly weary, and without much appetite, and then relate it to the onset of his malady? Esmond Long, in a Logan Clendening Lecture on the History and Philosophy of Medicine, recently discussed the case of Chopin,¹ whose tuberculosis story has already been the subject of considerable investigation and discussion. Long agrees, in effect, that the old story of Chopin having been tuberculous from boyhood is unsubstantiated, and, in fact, there is every reason to believe that he showed no signs of such infection when he reached Paris at the age of twenty-one with an introduction from Beethoven's doctor, Malfatti. Chopin was a brilliant success in Paris, being not only accepted as a superlative pianist and a first-class teacher, but also as a significant composer. As Long writes: "His social life was strenuous and unquestionably physically exhausting." There is no setting which makes better breeding soil for the tubercle bacillus.

The psychosomatic angle is being thrust into almost every disease these days, and a recent suggestion concerns a possible relationship between emotional distress and tuberculosis. It is not without interest to note, then, that Chopin had many loves, but none so strong nor subsequently so unhappy as in the episode of Maria Wodinska, to whom he had considered himself engaged in 1835 when he was twenty-five years of age. At the end of that year, the engagement broken and the morale low, Chopin was smitten with what was diagnosed as influenza. Many tuberculous patients tell their doctors that they "never really recovered from a bad attack of influenza" on such-and-such a date, and Long suggests that this attack of influenza was, in fact, the first clear evidence of his tuberculosis. If this is so, the disease was with him for over fourteen years before it killed him, and there may be doubt whether the view is completely acceptable. Again, there was a severe influenza epidemic in Paris in 1836-1837.

Points for consideration in all this were mentioned in a study of Chopin's medical history by Keith Barry, published in this journal in January, 1932, when it was pointed out that a professor of the Paris School of Medicine, with whom Chopin was staying at the time, reported that the young man was "tall and broad". Again, a year later, when the George Sand affair had just begun, that business-like woman made him consult a well-known authority, Gaubert, who "swore he wasn't phthisical", but said he was over-working and wanted "air, exercise and rest". However, Long reports an hæmoptysis in this year, and also states that Chopin spat up blood in an 1835 illness. Whatever the position in 1835 or 1836, there is no doubt that in 1838, when he was twenty-eight years of age, he spat up "a full bowl of blood" and more, and the malady was in full blast, and probably had been so for some time. It is extraordinary, and a tribute to his constitution and courage, that, till Chopin died in 1849, at the age of thirty-nine years, he continued to give recitals and write music, if with decreasing frequency. His February concert in

¹Proc. Staff. Meet. Mayo Clin., November 10, 1954.

²Surg. Clin. North Am., August, 1955.

³Surgery, January, 1954.

⁴Surg., Gynec. & Obst., June, 1956.

¹"A History of the Therapy of Tuberculosis and the Case of Frédéric Chopin", by Esmond R. Long, M.D.: Logan Clendening Lectures on the History and Philosophy of Medicine; Sixth Series; 1956. Lawrence: University of Kansas Press. 8½" x 5½", pp. 75. Price: \$2.00.

Paris the year before he died, where he brought forward new works, was described as "magnificent", and it was followed by a five months' tour of Britain, with five concerts in London itself, at one of which the Queen and her Consort were present. At this time he was still reported as playing "with unexpected force" the great bass octave section of the A Flat Polonaise.

Chopin went rapidly downhill in the last year, and, indeed, in his London season it was reported that he had to be "carried upstairs to the recital room", despite the vigour of his playing. Again comes the psychosomatic note of the painful break with George Sand, which Long reports as happening at the end of 1846 and Grove in 1847. Perhaps at such emotional times the sufferer is seized with despondency to the point of lack of sleep, lack of sufficient food and lack of general resilience.

It is clear that Chopin had clinical signs of tuberculosis in his mid-twenties, whatever the exact date of onset might be. One sister died of the disease, but the history of the parents and the rest of the family seems to be clear. Was there a retainer in the house, or an elderly relative near at hand, who planted the initial seeds of infection in the two children? Or was tuberculosis so rife in the world at that time that no city dweller could possibly escape initial infection?

Long's excellent account of Chopin is included in a slim and fascinating volume containing another Clendening Lecture which is a scholarly résumé of the therapy of tuberculosis from Hippocrates to modern times.

NORMAL PREGNANCY AND BODY COMPOSITION.

THE change which takes place in the normal fluid balances under the influence of hormonal imbalance and disease, and during acute or chronic fluid loss, are complex; the adjustment of fluid metabolism, especially in paediatric practice, is one of the more gratifying results of physiological research. Various studies have been made of the influence of age, sex and individual but normal bodily variations on the relationship of the basic tissues in the make-up of the body. I. S. Edelman *et alii*¹ have found that there is a considerable difference between individuals in the proportion of total body water. As the proportion of adipose tissue increases, the proportion of water falls. The newborn child has the highest proportion of water, on an average 77% by weight; this falls to a fairly stable level of about 59% in childhood, thereafter remaining at a steady level in the male subject, but dropping to about 50% in the female. The differences in water content of the two sexes seem unlikely to be simply explained on the basis that the female has increased body fat, and Edelman *et alii* suggest that there may be a sex-linked variation in the water content of lean tissue. On the whole, the views of other workers agree with those of Edelman *et alii*, though there is no general agreement on the suggestion that there is a gradual fall in body water in the aging adult of either sex.

During pregnancy the effects upon water metabolism are complex, and while the influence of pre-eclamptic conditions on the water balance has been extensively studied, the changes in body composition consistent with the normal are less fully understood. It is generally accepted that throughout pregnancy a state of relative hydration exists normally, though the significance of the increase in total body water remains obscure. Scandinavian workers have suggested that in normal pregnancy the blood volume increases on an average by 30%. Most of this increase is said to occur during the first half of pregnancy with the resulting relative haemodilution, despite some increase in the number of erythrocytes and in the amount of circulating haemoglobin. It has also been suggested that the increased haemopoiesis in the first part of pregnancy is associated with the increased production of adrenal cortical steroids.

¹ *Surg., Gynec. & Obst.*, July, 1952.

J. Seitchik and C. Alper¹ have made estimations of the changes which occur during normal pregnancy by measurement of the body water. The study was made on five normal women throughout pregnancy and during the post-partum period. Like previous investigators, Seitchik and Alper estimated the total body water by studying the distribution of antipyrine, and estimated the extracellular water by studying the distribution of mannitol. Throughout each pregnancy the amount of total body water increased, and to a greater extent than the increase in total body weight. The gain in extracellular water was proportional to the gain in total body water. As it is known that the nitrogen and calcium balance is positive throughout pregnancy, the loss of body solid can be accounted for only by a loss of body fat greater than the amount of lean tissue gain. From this series it is apparent that the loss of body fat, regardless of the body build of the individual, took place most rapidly in the second trimester. Seitchik and Alper suggest that the period of active fat loss is associated with the maximum rate of gain of cell mass—in other words, stored fat is utilized in the synthesis of lean tissue throughout pregnancy. Moreover, the cell mass of the mother was found to be less six weeks *post partum* than it was in early pregnancy, so that it would seem that the mother can also provide cell mass for the fetus from her own pre-pregnant tissues. The loss of lean tissue from the mother to the fetus was greatest in those mothers unable to synthesize lean tissue from their own stored fat. It is thus apparent that a patient, with adequate fat storage and not deficient in protein, is able to tolerate nutritional or caloric deficiencies during pregnancy. The volume of extracellular and total body water increased by about 40% in the patients studied; this compares reasonably well with the Scandinavian findings. Seitchik and Alper found that in the puerperium the loss of total body water was accompanied by increase in the fat and loss of the lean cell mass. They conclude that the increase of body water during normal pregnancy is an integral part of the accumulation of lean body mass both by the mother and by the fetus.

CHRONIC ANAEMIA AND THE CIRCULATORY SYSTEM.

THE human body is capable of considerable compensations which enable life to be maintained at surprisingly high levels of activity for long periods during the time that the amount of active circulating haemoglobin is considerably reduced. Chronic hypochromic anaemia in a healthy, well-fed population is nowadays uncommon, and the condition of chlorosis, which was seen in the impoverished and tight-laced societies of Victorian days, has ceased to exist. Nevertheless, severe chronic anaemias of the hyperchromic and macrocytic type are still a very real medical problem, and in the end it may be such secondary effects as cardiac failure or subacute combined degeneration of the spinal cord which drive the patient to seek medical advice. Severe chronic anaemia is combated by increased utilization of the available haemoglobin, and to this end cardiac output is increased, and the increased blood flow in important structures such as the active muscles is countered by a decreased blood flow in the skin and kidneys. The renal effects of anaemia are somewhat complicated by the fact that a reduction in renal efficiency, as R. Platt² has shown, is followed by a normochromic anaemia as an adaptation to ensure the maximal renal flow of plasma. A. Heyman *et alii*³ also found that in such chronic anaemic patients the cerebral oxygen consumption was reduced below that of control subjects. If oxygen was given to the anaemic patient the cerebral vascular resistance was increased, there was a rise in the cerebral oxygen consumption, and there was a fall in the cerebral blood flow. Heyman *et alii* suggest that chronic cerebral tissue hypoxia might be responsible for the reduc-

¹ *Am. J. Obst. & Gynec.*, June, 1956.

² *Brit. M. J.*, June 28, 1952.

³ *J. Clin. Invest.*, September, 1952.

tion in cerebral metabolism and possibly to some extent the mental symptoms of the chronic anæmic patient. The effects of severe chronic anæmia on the circulatory system itself have been closely investigated by W. Whitaker.¹ The study was made on ten patients, in eight of whom the anæmia was of the macrocytic Addisonian type, and was untreated. In most of these patients the cardiac output was found to be abnormally high, and in these patients the output fell when the anæmia was corrected. No consistent change in the oxygen uptake was found when treatment was instituted, but the oxygen saturation of venous blood was higher after treatment; this indicated that previously a greater proportion of available oxygen was utilized in the tissues. It was evident that the high cardiac output was related not to an increased oxygen consumption in the anæmic patient, but to increased availability of the reduced amount of oxygen in the blood. The increased cardiac output of the anæmia was probably related not so much to an increased heart rate as to an increased stroke-volume. In most patients treatment of the anæmia resulted in a fall of the venous pressure, especially in those patients who recovered from congestive cardiac failure. Whitaker believes that the high cardiac output in anæmia occurs independently of the elevation of venous pressure. Treatment usually resulted in the raising of both the systolic and diastolic blood pressure levels. Some patients subsequently became hypertensive, and this could well have been a late effect of the former renal ischæmia. In every patient there was, prior to treatment, an abnormally low renal blood flow which later increased as the anæmia was corrected. The reduction in flow in the kidneys in anæmia, despite the increased cardiac output, indicates a considerable reduction in the fraction of blood made available to the kidneys, due possibly to non-specific renal vasoconstriction and to reduction in the resistance to blood flow in other areas. However, a reduction in renal blood flow in the anæmic patient does not imply so great a reduction in plasma renal flow, for, as Platt has suggested, the body tends to keep renal plasma flow at a constant level by maintaining a balance between the available renal tissue and the concentration of the blood. Usually the glomerular filtration rate was affected in a similar manner to the renal plasma flow. The impairment of salt and water excretion in the anæmic state appeared to be attributable to abnormal tubular reabsorption, and there appeared to be no definite relationship between the tubular load and the congestive cardiac failure. It is of some interest to note that in primary and secondary polycythæmia, E. Malizia² found that the renal hemodynamic pattern was uniformly modified proportionally to the degree of increase in the hæmatocrit reading. Renal vasodilatation occurred, mostly in the afferent vessels, with an increase in blood flow which compensated for the decreased plasma fraction. These changes, like those of the opposite kind described by Whitaker, are reversed when the abnormality of the blood is corrected.

THOUGHTS ON "ORPHAN" VIRUSES.

At the annual meeting of the American Society of Tropical Medicine and Hygiene, held at Boston in November, 1955, a distinguished panel presented a symposium on newer knowledge of viral and rickettsial diseases. In his paper on cells in continuous culture, J. T. Syverton³ dealt with the preparation and uses of cell cultures; he discussed the effects of viruses on cells and their metabolism, and the effects of antimetabolites and antibodies on viruses; and he described how cell cultures are used for isolating, typing, and assaying viruses, for assaying antibodies, and for producing viral antigens and vaccines. Many cell cultures have been produced in various laboratories; two, the Hela stable cell strain derived from an epidermoid carcinoma of a human cervix, and Earle's pure live cell strain ("L") derived from a

single fibrocyte from the subcutaneous tissue of a mouse, are now being produced commercially. Among the various strains there is some selectivity, in that some are destroyed by certain viruses, while others are resistant to these but susceptible to others. This destructive cytopathic effect facilitates the general recognition of viral activity, and provides a method for coarse screening of mixed viruses.

T. H. Weller, discussing the problems revealed by the expanding use of tissue cultures, described how, in screening throat washings, stool samples, blood, or tissue specimens, many as yet unidentified cytopathic agents have been discovered. This type of work has already resulted in the isolation and typing of the viruses responsible for *herpes simplex*, varicella, mumps and measles; for the typing of many extra strains of influenza and Coxsackie viruses; and for the isolation of adenoidal-pharyngeal-conjunctival (APC) and acute respiratory disease (ARD) virus groups. However, when all the known types and strains have been sorted out, there still remain some cytopathic viruses, of human origin and cytopathic to cells of human origin, about which nothing has been discovered beyond these two facts. Some, acting as do poliomyelitis viruses, are directly and promptly cytopathic to all the test cells, while others move more slowly through the test cells in the manner of the varicella virus, as if they are capable of transferring only from one cell to an adjacent susceptible cell.

Those viruses which have not been linked with any known human disease have come to be called "orphan" viruses. They have been isolated from children and adults, well and ill, and it is only reasonable to assume that, after the known viruses associated with known diseases have been accounted for, the remaining orphan viruses are indicative of the presence in the host of some inapparent infection, or of some carrier state. We are familiar with the fact that the skin swarms with pathogenic bacteria living harmlessly until some upset lowers skin resistance and allows the bacteria to cause damage. What if the tissues similarly harbour many varieties of potentially harmful viruses waiting only for some breach in the defences to give them their opportunity? (The *herpes simplex* virus does exactly that.) Then, what if one of the orphan viruses, working slowly in the fashion of the varicella virus, seizes on cells rendered susceptible by some slight traumatization, and sets up the condition of osteoarthritis? The waxing and waning of this disease, with its burning out, only to start smouldering again—this is completely compatible with the course run by some known viruses. Some virus epidemics behave exactly in this way, flaring up and smouldering among the population according as they wax and wane in virulence, or as they encounter susceptible or resistant population groups. Why should not individual viruses behave similarly in the cell population of the body?

Perhaps the breach in the body's defences may occur when some metabolic upset renders the selected cells susceptible to the selective orphan virus—could this account, say, for rheumatoid arthritis, or for essential hypertension? There is a parallel to this in the association of boils and carbuncles with glycosuria. Further, since speculation has already gone so far, what if the original metabolic upset could have been due to the effects of other selective orphan viruses? Could there be, perhaps, a virus with an affinity for the cells of the islets of Langerhans? We know that damage to one kidney, be it through infection, calculus, or tumour, causes first a condition of essential or benign hypertension, and that removal of the damaged kidney at this stage relieves the hypertension; if the damaged kidney is not removed in time, the healthy kidney eventually becomes affected and the benign hypertension becomes malignant. Does an orphan virus attack the damaged, susceptible kidney, secreting as a by-product a pressor substance capable of rendering the healthy kidney's cells susceptible to attack?

Such fascinating speculations could go on indefinitely. Their fascination lies not only in their possibility, but also in the fact that the newer techniques of cell culture make possible the investigation of that possibility.

¹ *Quart. J. Med.*, April, 1956.

² *Acta med. scandinav.*, 154: 5, 1956.

³ *Am. J. Trop. Med.*, May, 1956.

Abstracts from Medical Literature.

OBSTETRICS AND GYNÆCOLOGY.

Vascular Anomalies Resulting from Fetal Anoxia.

C. G. TEDESCHI AND T. H. INGALLS (*Am. J. Obst. & Gynec.*, January, 1956) have examined the fetuses of pregnant female mice which had been submitted to reduced atmospheric pressure simulating altitudes of 25,000 or 28,000 feet, for five hours. They found that the anoxia caused a disorderly development of fetal blood vessels. The basic abnormality was one of distribution, quantity or quality of the endothelial or supporting elements. The defects were seen in the skin, subcutaneous tissue, eye and central nervous system, corresponding with vascular hamartomatous processes seen in human beings. Gross congenital defects such as cranioschisis, hemivertebra and rib defects, kinky tail, cleft palate, variations of open eye and microphthalmia occurred in association, and it is inferred that they are permanent "scars" of the systemic insult previously delivered. The authors produce their experimental evidence to support their thesis that vascular disorders and circulatory disturbances during development can cause anatomically unrelated defects.

Narcotic Addiction in the Newborn.

M. J. GOODFRIEND, F. A. SHEY AND M. D. KLIEN (*Am. J. Obst. & Gynec.*, January, 1956) review ten cases of pregnancy complicated by drug addiction. Babies who develop abstinence symptoms show a characteristic syndrome within twenty-four to seventy-two hours of birth, with progressive restlessness, irritability and a protracted shrill cry. They feed poorly, vomit, yawn, have intermittent cyanosis and diarrhoea, and may undergo severe dystrophy and die in convulsions. The placenta does not retain morphine and is not an important barrier to its passage. Violent intrauterine foetal movements have been noted at the time the mother required a dose of opiates, which quelled the abnormality. In infants showing withdrawal symptoms, the overall reported mortality is 33.8%. When the condition is not recognized and not treated, the mortality is 93.2%. Recommended treatment of the baby is the administration of morphine derivatives or barbiturates or both.

The Treatment of Vesico-Vaginal Fistula.

J. C. MOIR (*Am. J. Obst. & Gynec.*, March, 1956) reviews and discusses the treatment in 136 consecutive cases of vesico-vaginal fistula. He considers these to be highly selected cases because of their difficulty and unusual nature, or because they had resisted previous attempts at surgical cure. Almost one-third were attributable to obstetrical causes, either laceration during operative delivery or pressure necrosis after long labour. Over two-thirds of the cases were of gynecological origin, and, for

the most part, followed hysterectomy, colporrhaphy, radium treatment and other miscellaneous operations. The author recommends three preliminary investigations prior to operation: examination for the possibility of multiple fistulae; the performance of excretion pyelography to determine renal function; examination to exclude the presence of vesical calculus. The majority of fistulae, in this series, belonged to one of three types: true vesico-vaginal fistula arising in the trigone of the bladder and usually situated in the mid-line; fistulae due to bladder neck destruction usually following pressure necrosis at parturition; fistulae due to urethral destruction complicating difficult delivery or faulty colporrhaphy technique. The author considers that the great majority of even complicated and difficult fistulae can be repaired by simple, direct methods, through the vaginal route. Operative cure was successful in all but two of the reported cases. The size of the fistula, the presence of complete destruction of the urethra, the duration of the fistula or a history of previous attempts at surgical closure does not necessarily mean a bad prognosis for cure. Resort to transplantation of the ureters into the colon or rectum is not indicated on these grounds. Two complications of bad prognostic significance are extensive destruction of the muscle of the bladder neck, or the presence of dense fibrosis around the fistula causing it to adhere to the pubic ramus. Functional cure following operative closure was usually excellent, but residual stress incontinence was severe in four cases, and the ureters were subsequently transplanted into the rectum. The author recommends closure of a vesico-vaginal fistula by the vaginal route, unless very special reasons exist for approach by the transvesical or transabdominal route. Details of operative technique are discussed and illustrated. These include the position of the patient for operation, essential instruments, methods of suturing and suture material, and post-operative care. Common variations in technique to suit particular circumstances are briefly described. The author concludes that vesico-vaginal fistula is, in the majority of cases, an eminently curable lesion. Successful treatment demands gentleness of touch, infinite patience, and attention to the minutiae of technique on the part of the surgeon.

Urinary Tract Injuries Resulting from Pelvic Surgery.

H. S. EVERETT AND R. F. MATTINGLY (*Am. J. Obst. & Gynec.*, March, 1956) have made a study of patients with urinary tract injuries, resulting from gynecological operations, treated at Johns Hopkins Hospital during the twenty-one-year period from 1933 to 1953. There were 40 cases of ureteral injuries, 77 cases of perforation of the bladder, and 56 vesico-vaginal fistulae. The incidence of injuries, resulting from gynecological surgery, abdominal and vaginal, performed at the Johns Hopkins Hospital, was approximately 0.7%. Nineteen of the ureteral injuries were recognized and repaired at the time of operation. Twelve ureteral injuries were not recognized and not repaired until later. Nine occurred elsewhere, but were repaired at the Johns

Hopkins Hospital. Myomata with severe pelvic inflammatory disease were the most common cause of surgery resulting in ureteral injury. The operations of total and subtotal abdominal hysterectomy, with bilateral or unilateral adnexectomy, were the most common operations to be followed by ureteral injury. Unrecognized injuries of the ureter occurred more frequently after total hysterectomy than after more conservative procedures. The outstanding injuries to the ureters were transection, laceration, catheter perforation and the formation of a uretero-vaginal fistula. Three perforations complicated pre-operative catheterization of the ureters preparatory to major pelvic surgery. The authors found that uretero-vesical anastomosis was the treatment of choice for most of the ureteral injuries; this was performed in 27 of the 40 cases, with only two failures. Uretero-ureteral anastomosis was performed three times with only one success. Nephrectomy was necessary on five occasions. In the case of ureteral ligation unrecognized at the time, immediate deligation is condemned, and temporary nephrostomy with later repair of the ureteral defect is recommended. Laceration of the bladder was recognized and repaired at the time of operation in 77 cases. Fifteen occurred while the abdominal incision was being made, 48 occurred during dissections around the bladder, and 14 complicated vaginal operations. The authors observe that bladder injuries recognized and repaired at the time rarely, if ever, lead to any serious difficulty. Among 56 patients with vesico-vaginal fistulae reported, 50 had undergone pelvic operations elsewhere and six had had operations at Johns Hopkins Hospital. Total abdominal hysterectomy was by far the most common operation to be complicated by the formation of a vesico-vaginal fistula. The authors consider that fistulae more commonly follow inclusion of bladder wall in a suture during closure of the vaginal vault than incision or laceration of the bladder at operation. They do not attempt to close a fistula in less than six months from its inception, or in less than six months after unsuccessful surgery. Forty-three of 56 fistulae were successfully closed by the Latzko technique of partial colpocleisis.

The Massive Stilbœstrol Therapy of Endometriosis.

W. R. COOKE (*Am. J. Obst. & Gynec.*, March, 1956) reviews the past therapy of endometriosis and reports the results of treatment of 33 patients with massive doses of stilbœstrol. Originally, endometriosis was considered to be a neoplastic disease of potential malignancy. Later, it was recognized that the tissue composing these lesions was endometrium and responded to ovarian hormonal influence. From this developed the treatment by castration; some authorities recommended hysterectomy. The conservative treatment of endometriosis followed after recognition of certain characteristics of the disease: the condition of endometriosis does not, in itself, menace the life of the patient; the chief therapeutic consideration is the relief of pain; most of the peritoneal areas likely to be affected by endometriosis lie

within the sensory distribution of the presacral plexus, and this plexus can be excised without adverse effects; the disease is, in some cases, self-limiting, and may even be followed by restoration of fertility. The failure of presacral neurectomy to relieve pain in the ovary led the author to employ ovarian neurectomy without noticeable ill effects. Five of the 33 patients have had successful pregnancies after bilateral ovarian neurectomy and presacral neurectomy. The diagnosis of endometriosis, in the reported series, was based on the following criteria: the history of dysmenorrhoea with a peritoneal or ovarian localization, usually in the cul-de-sac, referred to the rectum; persistence and progressive spread of this type of pain; finding, on palpation, of fixation of the viscera by adhesions, and obliteration of the visceral outlines; the finding of small, hard, globular nodules of various sizes among the dense adhesions. The technique of massive stilbestrol treatment employed was as follows: an initial dose of one milligramme thrice daily was increased every five days to two, three, five, 10, 15 and finally 25 milligrammes three times a day. The 25 milligrammes dose was continued until the patient commenced to bleed; it was then immediately raised to 50 milligrammes, then to 75 milligrammes, and 100 milligrammes, and higher with each recurrence of bleeding. The total treatment period was three months. The author found that in all cases the cyclic pain was relieved. In all cases only actual cysts and some fixation of organs could be palpated at the end of the period of three months' treatment.

Treatment of Endometrial Carcinoma.

J. C. SMITH (*J.A.M.A.*, April, 1956) evaluates the results of treatment of endometrial carcinoma by immediate surgical treatment, and by combined irradiation and surgery. He considers that the principle of treatment of endometrial carcinoma is the eradication of all tumour cells from the largest amount of pelvic tissue, with the least possible delay after diagnosis is established. He recommends that the method of therapy should be selected on these surgical principles rather than on a comparison of survival rates. Pre-operative irradiation therapy did not eradicate all tumour cells from three out of six patients reported by the author. Tabulated reports from the medical literature indicate an average of 62% of patients with residual carcinoma of the endometrium after preliminary intra-uterine radium therapy. Variations in the situation of the carcinoma and possible distortions of the uterine cavity, apart from the depth of tumour invasion, may prevent effective irradiation. The author considers that hysterectomy is therefore superior to intrauterine radium therapy in the eradication of tumour cells from pelvic tissues. Combined treatment, as a rule, requires four to eight weeks for completion. During this time tumour cells beyond the range of radium continue to endanger the life of the patient. The author considers it difficult to prove or disprove the assertion that preliminary irradiation prevents the spread of tumour

cells during operative manipulation. He concludes that endometrial carcinoma, when superficial, can be cured by radium therapy, and by hysterectomy; when the cancer is deep and tumour cells lie beyond the cancerocidal range of radium, only hysterectomy is curative. In both events, combined therapy necessitates disadvantages that are not incurred with primary surgical treatment. Primary surgical treatment is superior to combined therapy by the proportion of cases in which extrauterine metastasis occurs during the period of delay which precedes operative removal of the uterus.

Delivery After Caesarean Section.

A. M. FLEMING (*Am. J. Obst. & Gynec.*, June, 1956) reports on 295 women who had had a previous Caesarean section and were subsequently delivered, 145 by elective Caesarean section and 150 after a trial of labour. It is suggested that in all cases of previous Caesarean section there should be available full information as to the previous operation, with particular reference to the indications, the type of section, and any post-operative infection. The patient was admitted for observation at the thirty-seventh to thirty-eighth week. If a trial of normal labour was permitted, cross-matched, compatible blood was secured and the theatre staff was warned. X-ray placentalography was considered a worthwhile procedure. Factors which influenced the performance of an elective Caesarean section were (i) overdistension of the uterus, (ii) tenderness over the scar region, (iii) additional abnormalities such as fibroid tumours, an abnormal uterus, a history of myomectomy. In five cases only was there rupture of a previous scar; four of these occurred after a classical Caesarean section, and one occurred after myomectomy in the anterior wall of a six-weeks gravid uterus. In the elective Caesarean group of 145 patients, death of the mother occurred in two cases, and three infants were lost. In the 150 patients for whom trial of labour ensued there were two cases of ruptured uterus, and one maternal death from post-partum haemorrhage. Eight babies were lost. The incidence of rupture of the uterus is two in 295 cases, or 0.68%. In the trial of labour group, 118 patients were delivered vaginally; 32 sections were required. In the whole series 40% of those patients who had a previous Caesarean scar were delivered vaginally.

Functional Uterine Bleeding.

W. M. JACOBS AND J. E. LINDLEY (*Am. J. Obst. & Gynec.*, June, 1956) report 92 cases of functional uterine bleeding. The diagnosis was made on the history and the lack of pelvic findings to account for the bleeding. For all patients over thirty-five years of age a biopsy was taken and a diagnostic curette was performed. The age of the patients ranged from seven years to fifty years. Over the age of fifty years the bleeding was not regarded as functional. The endometrium was available for study in 51 cases; in 25 it was proliferative, in 11 secretory, in two menstrual, in seven hyperplastic, and in five mixed in type. Treatment was by curettage, cyclic oestrogen therapy, as recommended by Hamblen, or a combina-

tion of sedation and empirical thyroid therapy. The ultimate outcome in the patients treated by curettage and cyclic oestrogen therapy was about the same. Curettage offered better immediate results, but if the patient responded immediately to oestrogen therapy, her chances of remaining well were rather better than the curettage group. The fact that 17 of 24 patients receiving thyroid therapy and sedation were apparently cured speaks well for the fact that, given time, most of these patients will have a spontaneous cure. The authors conclude that the main problems are (i) to rule out organic pathological conditions, and (ii) to provide some means of immediate or reasonably immediate haemostasis.

Treatment of External Endometriosis.

C. M. MALONE (*West. J. Surg.*, May, 1956) reviews 237 cases of external endometriosis and discusses the treatment of this disease under four broad headings: prophylactic, non-surgical, surgical, and psychosomatic. The diagnosis was established by surgical means in 82 patients and was made on the clinical findings in the remaining 155 patients. Clinical diagnosis was made on the following symptoms and findings: increasing dysmenorrhoea, menometrorrhagia, low back pain, dyspareunia, infertility, retroverted and fixed uterus, nodular and tender utero-sacral ligaments and recto-vaginal septum, and indurated adnexa. Among prophylactic measures the author mentions early marriage to ensure the protection of child-bearing, replacement of the retroverted uterus, preferably by a Smith-Hodge pessary, and the promotion of endometrial drainage. Non-surgical treatment encourages child-bearing, relieves cyclical pain with suitable analgesics, and suppresses ovarian function with hormones. The author prefers androgens to oestrogens, as there are less undesirable side-effects with the former. He considers that irradiation to ablate ovarian function has a very narrow field of application in the treatment of external endometriosis. Its chief disadvantage is that the diagnosis is not confirmed without surgical and pathological examination, and adhesions or diseased organs cannot be treated by irradiation. Surgery has much to offer in the treatment of external endometriosis and the author emphasizes the importance of conservative surgical measures. One-third of the patients in the reported series required operation, and in 50% of these the surgical procedure was conservative. Of those patients treated conservatively, 40% later became pregnant. The following principles of surgical treatment are recommended: dilatation of the cervical canal, extirpation of endometrial implants, the freeing of adhesions, myomectomy if myomata are present, and suspension of the uterus. If there is dysmenorrhoea of a disabling nature, it may be advisable to perform presacral neurectomy. Patients of an older age group who cannot be carried on to the menopause may need radical surgical measures. The author mentions the importance of the psychosomatic approach in conservative treatment. This includes assessment of the patient as a whole, and the allaying of fear by explanation and reassurance.

British Medical Association News.

ANNUAL MEETING.

The annual meeting of the Queensland Branch of the British Medical Association was held at British Medical Association House, Wickham Terrace, Brisbane, on August 25, 1956, Dr. ALAN E. LEE, the President, in the chair.

MINUTES.

The minutes of the previous meeting, held on September 3, 1955, were read and confirmed.

ANNUAL REPORT OF THE COUNCIL.

The annual report of the Council for the year ended June 30, 1956, was received and adopted. The report is as follows:

The Council has pleasure in presenting the sixty-second annual report of the work of the Branch for the year ending June 30, 1956.

Membership.

The membership of the Branch is 1163 plus nine honorary life members, as against 1134 and nine honorary life members in 1955, making a total gain of 29. There are also 102 honorary associate members, 31 of whom were elected this year. Nineteen honorary associate members were elected to full membership on graduation.

The gains were: new members, 66; transfers from other branches, 39; members reinstated, 1. The losses were: members transferred to other branches, 40; deceased, 13; resigned, etc., 11; struck-off, 13 (owing to non-payment of subscription).

The following, by virtue of their fifty years' membership of the British Medical Association, have become honorary life members: Dr. W. A. Beet, Dr. Eleanor Bourne, Dr. A. B. Carvoso, Dr. Eleanor Greenham, Dr. B. L. Hart, Dr. W. Wallis Hoare, Dr. Val McDowall, Dr. T. A. Price (also Honorary Vice-President of the Branch), Dr. C. E. Williams.

Obituary.

It is with deep regret that we record the deaths of the following distinguished members: Dr. Reginald George Quinn, one of the most trusted members of the British Medical Association, to whom we pay tribute for the great services he rendered to the Association in Queensland over many years as Councillor, Treasurer and President of the Branch, and as its representative on the Medical Board of Queensland and many other bodies. He was a member of the Ethics Committee of the Branch and Honorary Secretary of the Medical Defence Society of Queensland since 1947.

Dr. Harold Russell Love, Member of Council from 1947 until his death and a former Honorary Secretary and President of the Branch. His work on behalf of the profession as a member and office bearer of Council was of inestimable value, while in his practice as a consulting physician and as a teacher of students he maintained and enhanced the standards of medicine in Queensland.

Dr. Errol Solomon Meyers, during many years of devoted service to the medical profession, served on the Council and occupied the positions of Honorary Secretary and President of the Branch, and was also its representative on the Federal Council of the British Medical Association in Australia. He was a principal pioneer in the development of the Queensland Medical School, and thereafter did much to shape its destiny as Dean of the Faculty of Medicine.

Tribute is paid to Dr. A. V. Meehan and Dr. A. R. Murray, and to the great influence each had exerted in the practice of orthopaedic surgery in Queensland.

As Chairman of the Post-Graduate Medical Education Committee and of the Queensland Executive Committee of the Royal Australasian College of Surgeons, Dr. Meehan had made valuable contributions to medical education in this State. Their untimely deaths under such tragic circumstances were a great loss to the general profession of medicine.

It is with regret that we also record the deaths of Dr. J. A. Goldsmid (honorary life member), Dr. H. R. Cope (honorary life member), Dr. W. Woodburn Stevens (honorary life member), Dr. J. W. Heaslop, Dr. A. A. Heath, Dr. I. Roxon-Ropschitz, Dr. E. T. Schmidt (President of the Bundaberg Local Association, British Medical Association, for many years), and Dr. Ian Sewell.

Wickham Terrace Tragedy.

On December 1, 1955, an event almost unparalleled in peacetime occurred when a person, Karl Kast, armed with a revolver and home-made bombs, attempted to murder a group of Brisbane orthopaedic surgeons. Dr. A. V. Meehan and Dr. A. R. Murray were killed, and Dr. M. J. Gallagher and Dr. J. R. Lahz received injuries.

The Council expressed its deepest regrets to the relatives of the deceased members and to those injured and was largely represented at the funerals of Dr. Meehan and Dr. Murray.

Later it protested to the Postmaster-General about the use made of the tragedy in a wireless broadcast, and received his promise of appropriate action in what he called an appalling indiscretion.

Meetings.

In addition to the annual general meeting, nine ordinary general meetings of the Branch were held, including the Bancroft Oration, Jackson Lecture, and two clinical meetings. The average attendance at the general meetings was 57. One special general meeting on December 16, 1955 (amendment of By-law 4).

Council.

Twenty-four meetings of the Council were held since June 30, 1955, one being a special meeting. Eighteen of these meetings were in the present Council year. Record of attendance is as follows:

Dr. Alan E. Lee (President, Federal Council Representative)	21
Dr. Felix Arden (President-Elect) (appointed September 23, 1955)	16
Dr. H. S. Patterson (Past President)	22
Dr. D. R. L. Hart (Honorary Secretary)	21
Dr. J. G. Wagner (Honorary Treasurer) (on leave to November 11, 1955)	14
Dr. W. J. Saxton (Chairman of Council)	24
Dr. D. C. Jackson (Chairman of Subcommittees, Councillor)	18
Dr. Charles Roe (Honorary Secretary of Subcommittees, Councillor)	17
Dr. B. N. Adsett (Councillor)	20
Dr. B. L. W. Clarke (Councillor)	11
Dr. A. P. Crawford (Councillor) (appointed from July 22, 1955)	20
Dr. H. W. Horn (Councillor, Federal Council Representative) (on leave from May 11, 1956)	20
Dr. A. F. Knyvett (Councillor) ¹	18
Dr. H. R. Love (Councillor) (deceased April 17, 1956)	12
Dr. John Nye (Councillor) ¹	19
Dr. D. P. Sapsford (Councillor) (appointed from September 23, 1955)	16
Dr. W. H. Steel (Councillor)	18
Dr. Donald Watson (Councillor) ¹	19
Dr. N. V. Youngman (Councillor) (appointed May 11, 1956)	1

Scientific Meetings.

July: Paper by Dr. Murray Elliott—"Obstetric Factors in the Neo-Natal and Stillbirth Rates, with Special Reference to Queensland".

August: Dr. Louis H. Bauer, Secretary-General of the World Medical Association—"The World Medical Association and its Relation to Medical Progress" (Bancroft Oration).

October: Professor A. J. Canny—"Knowledge Comes but Wisdom Lingers" (Jackson Lecture).

November: Clinical meeting in conjunction with the Mater Misericordiae Hospital Clinical Society.

February: Clinical meeting in conjunction with the Brisbane Hospital Clinical Society.

March: Lectures by the following: Dr. P. J. Landy, "Cervical Spondylosis"; Dr. J. T. Duhig, "Some Aspects of Exfoliative Cytology"; Dr. Newton Chalk, "Complications of Antibiotic Therapy"; Dr. W. S. Georgeson, "Post-Gastrectomy Troubles".

¹ New Councillor—elected September 3, 1955.

April: "Fees in General Practice".

May: Dr. P. L. Bazeley, Commonwealth Health Department (Serum Laboratories)—lecture on poliomyelitis immunization campaign—Salk vaccine.

June: Dr. H. G. Wilson—"Aspects of Cardiology".

Office Bearers and Councillors.

The following office bearers were appointed by the Council for 1955-1956: Chairman of Council, Dr. W. J. Saxton; Honorary Treasurer, Dr. J. G. Wagner (reelected); Chairman of Subcommittees, Dr. D. C. Jackson (reelected); Honorary Secretary of Subcommittees, Dr. Charles Roe (reelected); Honorary Librarian, Dr. Neville G. Sutton (reelected); Honorary Assistant Librarian, Dr. Konrad Hirschfeld (reelected).

Dr. D. R. L. Hart was reelected Honorary Secretary, and in accordance with the by-laws the following were elected members of the Council for a period of two years, 1955-1956: Dr. B. N. Adsett, Dr. A. F. Knyvett, Dr. John Nye, Dr. Charles Roe, Dr. W. J. Saxton, Dr. J. G. Wagner, Dr. Donald Watson.

Dr. T. V. Stubbs Brown resigned on September 9, 1955, and Dr. A. P. Crawford was appointed in his place. Dr. N. V. Youngman was elected by the Council on May 11, 1956, to succeed the late Dr. Harold Love. Dr. J. G. Wagner obtained leave of absence while overseas from May 27 to November 11, 1955, and Dr. H. W. Horn, who is representing the Queensland Branch at the annual meeting of the British Medical Association in England, was granted leave from May 11, 1956.

We regret that Dr. B. L. W. Clarke, Dr. H. W. Horn and Dr. W. H. Steel are not seeking reelection for the ensuing year.

Representation.

The Branch was represented as follows during the year:

Council of the British Medical Association: Dr. Isaac Jones, *British Medical Association, Representative Meeting, Brighton, July, 1956:* Delegate, Dr. H. W. Horn.

Federal Council of the British Medical Association in Australia: Dr. H. W. Horn, Dr. Alan E. Lee.

Australasian Medical Publishing Company, Limited: Dr. Alan E. Lee (director), Dr. H. W. Horn, Dr. J. G. Wagner (members).

College of Nursing, Australia (Queensland State Committee): Dr. D. A. Henderson.

Flying Doctor Service of Australia: Dr. Harold Crawford. **Medical Assessment Tribunal:** Dr. B. L. W. Clarke.

Medical Board of Queensland: Dr. T. V. Stubbs Brown, Dr. F. W. R. Lukin, Dr. J. G. Wagner.

Medical Officers' Relief Fund (Federal): Queensland Committee: Dr. K. B. Fraser, Dr. G. W. Macartney, Dr. W. H. Steel.

Physical Fitness Association of Queensland: Dr. Harold Crawford.

Physiotherapy Board of Studies: Dr. Donald Watson.

Queensland Radium Institute: Dr. Alan E. Lee.

Post-Graduate Medical Education Committee: Dr. Alan E. Lee, Dr. B. N. Adsett, Dr. A. F. Knyvett.

Queensland Bush Children's Health Scheme: Dr. H. W. Anderson.

Queensland Bush Nursing Association: Dr. L. Bedford Elwell.

Queensland Health Education Council: Dr. W. J. Saxton. **Queensland Institute of Medical Research:** Dr. W. H. Steel.

Society of Laboratory Technicians of Australasia (Queensland Branch): Dr. J. T. Duhig.

Federal Medical War Relief Fund: Local Committee of Management: Dr. J. G. Wagner (Chairman), Dr. F. W. R. Lukin (Honorary Secretary), Dr. J. V. Duhig, Dr. B. L. W. Clarke.

Surf Life Saving Association of Australia (Queensland Branch): Dr. F. W. R. Lukin.

National Safety Council of Australia (Queensland Division): Dr. L. A. Little.

Red Cross Blood Transfusion Service Committee: Dr. K. B. Fraser.

Medico-Pharmaceutical Liaison Committee: Dr. R. S. Bennett, Dr. O. S. Hirschfeld, Dr. H. W. Horn, Dr. A. D. A. Mayes.

Medical Services State Committee of Inquiry: Dr. K. B. Fraser, Dr. G. V. Hickey (senior), Dr. H. W. Horn, Dr. H. S. Patterson.

University of Queensland Faculty of Medicine: Dr. Alan E. Lee.

The Editor of THE MEDICAL JOURNAL OF AUSTRALIA was represented by Dr. Felix Arden.

Library.

Dr. Neville G. Sutton was reelected Honorary Librarian and Dr. Konrad Hirschfeld was reelected Assistant Honorary Librarian.

From June, 1955, to July, 1956, three hundred and sixty-three (363) journals and text-books were borrowed by members and other medical and scientific libraries.

The Branch receives fifty journals plus "British Surgical Practice", "The Medical Annual", and selections of year books on various subjects and other medical and clinical reports.

The Branch wishes to thank the Editor of THE MEDICAL JOURNAL OF AUSTRALIA for another donation of forty (40) text-books, which are a valuable addition to the library.

The Association would like to acknowledge its appreciation of the cooperation and assistance rendered throughout the year by other Branches and the medical and scientific libraries of Queensland.

In memory of the late Dr. R. G. Quinn, the directors of the British Medical Agency of Queensland Proprietary, Limited, presented Howard W. Haggard's well known "Devils, Drugs and Doctors" to the Library.

A subcommittee has met on several occasions to consider the future of the Library of the Branch in the new building.

Building and Maintenance Subcommittee.

Personnel: Dr. L. J. J. Nye (Chairman), Dr. B. L. W. Clarke, Dr. A. D. A. Mayes, Dr. J. G. Wagner, Dr. L. A. Little, Dr. D. Sapsford, Dr. D. Watson.

The past year has proved one of great activity for this subcommittee. After estimates of the cost of erecting a suitable building on the Wickham Terrace site showed it to be beyond the financial capacity of the Branch, and taking into account the parking difficulties in this area, the Council decided to purchase a fine property in L'Estrange Terrace, Herston, which had been the home of Dr. J. V. Duhig.

The development of this property has necessitated frequent meetings of the subcommittee. Plans for its modification to suit the needs of the Branch have received the approval of the Brisbane City Council, and accommodation will be made available for the British Medical Agency, the Post-Graduate Committee in Medicine, and other ancillary bodies, and the Australian Dental Association.

Reorganization of the library facilities of the Branch is under consideration, and it is hoped in the near future to erect in the grounds a suitable hall for Branch meetings and for the use of educational and scientific bodies.

Ethics Committee.

The following were reelected members of the Ethics Committee at the last annual meeting of the Branch: Dr. Val McDowall, Dr. L. J. J. Nye, Dr. J. J. Power, Dr. R. G. Quinn (deceased), Dr. Norman Sherwood, Dr. F. W. R. Lukin and Sir Alexander Murphy. No meetings were held during the year.

Organization Subcommittee.

Personnel of Subcommittee: Dr. D. C. Jackson (Chairman), Dr. Charles Roe (Honorary Secretary), Dr. H. R. Love (deceased), Dr. H. W. Horn, Dr. B. N. Adsett, Dr. Donald Watson, Dr. John Nye, Dr. A. P. Crawford, Dr. A. F. Knyvett, Dr. N. V. Youngman.

Twenty-four meetings were held during the year and recommendations were made to Council in accordance with the usual procedure.

Medical Fees Tribunal.

Personnel: Dr. J. G. Wagner (Chairman), Dr. Alan E. Lee (Honorary Secretary), Dr. R. G. Quinn (deceased), Dr. N. Sherwood, Dr. D. C. Jackson.

Five cases were submitted for adjudication during the year and were then referred to Council for necessary action.

Bancroft Oration.

The thirtieth Bancroft Oration was delivered at the general meeting of the Branch held on August 29, 1955, by the Secretary-General of the World Medical Association, Dr. Louis H. Bauer. The title was "The World Medical Association and its Relation to Medical Progress".

At the conclusion of the Oration the Joseph Bancroft Memorial Medal was presented to the Orator by the President.

Jackson Memorial Lecture.

This lecture is an historical one delivered annually in memory of the late Ernest Sandford Jackson.

Professor A. J. Canny delivered the twenty-fifth Jackson Memorial Lecture on October 7, 1955, at the Lecture Theatre, Medical School, Herston. The title of the lecture was "Knowledge Comes but Wisdom Lingers".

Memorial Prizes, 1955.

At the annual general meeting of the Branch, to be held on August 25, 1956, the following prizes awarded on the recommendation of the Faculty of Medicine of the University of Queensland for 1955 will be presented by the President.

Memorial Prize of the Queensland Branch of the British Medical Association: David Jollie Brand, M.B., B.S., University of Queensland, 1955.

Harold Plant Memorial Prize: Barry Nurcombe, M.B., B.S., University of Queensland, 1955.

B.M.A. Memorial Roll.

This memorial roll commemorates the services of former distinguished members of the Queensland Branch of the British Medical Association.

According to custom the names appearing in the memorial roll of the Branch were read by the President at the annual general meeting held on September 3.

The name of Alexander Hammett Marks has been added to the roll.

Medical Students' Loan Fund.

Personnel of Committee: Sir Alexander Murphy; Professor H. J. Wilkinson; Professor J. H. Tyrer; Dr. Donald Watson, and a representative appointed by the University of Queensland Medical Society (Mr. John Campbell).

This Fund, which was established to help needy students in the later years of their course, now contains £1100 8s. 5d. The Committee which administers the Fund has concentrated in the past on building up the Fund rather than in active help of students, but following a discussion between the Executive Committee of the Council and the Committee, the existence of the Fund has been more widely advertised.

During the year two students were granted financial help to aid in the completion of their studies.

Limited Registration of Recent Graduates.

This year recent graduates have obtained only registration to practise within an approved hospital, and this has created a number of problems which the Council has discussed with the Director-General of Health and Medical Services and with the Medical Board.

After providing evidence of approved practice in a hospital, and certain other requirements, graduates will be granted full registration.

Membership Subscription.

At a special general meeting of the Branch held in December it was resolved "that the membership subscription be increased by two guineas".

This was found necessary to meet increasing costs.

State Health Matters.

Good relationships exist with the Department of Health and Home Affairs, and in particular the Director-General, Dr. A. Fryberg, has been very helpful in many matters. These have included conditions of service in the Queensland Radium Institute, the position of medical superintendents of country hospitals, the relationship of private practitioners to these hospitals, and administrative details regarding the Salk vaccine.

Salk Vaccine.—At the request of the Director-General of Health and Medical Services, a member of the Branch was nominated to the committee arranging the programme of immunization with Salk vaccine. It was resolved by Council to assure the Director-General of our cooperation. An approach was made to the profession asking for their assistance in the campaign, to which there was an excellent response.

Workers' Compensation.

A review of the schedule of fees under the agreement existing between the Council and the Commissioner was undertaken during the year.

An approach to the Treasurer resulted in the maximum payment for medical services in any one accident being increased from £50 to £70, though this will still require legislative enactment.

When a further approach was made to the Commissioner to negotiate a new agreement on this basis, he decided that he would prefer to work without an agreement, but would institute a refund system by which doctors could charge insured workers who would then make application to the Commissioner for refund of their medical costs. It is believed that this system is unlikely to be permanent, and members have been warned not to enter into any private arrangements with the Department during this interim period.

Fees in General Practice.

Following increases in general practitioner fees in Victoria and New South Wales, the Council decided to seek the views of Branch members as to the adequacy of present fees in this State.

On the basis of views expressed at a general meeting of the Branch, the results of a referendum of members, and of an investigation undertaken by a subcommittee of the Council, it was resolved that members should be informed that fair and reasonable fees would be: consultations in the surgery, 17/6; visits in the home, 25/-. It was decided to leave out-of-hours fees to the discretion of the doctor.

Salaried Medical Officers' Group (B.M.A.).

Since about 240 members occupy salaried positions, and it is certain they have problems that may not be completely known to the Council and for which their membership entitles them to help, it was decided by the Council that a Salaried Medical Officers' Group (British Medical Association) should be formed to promote the interests of their members. This proposal was received enthusiastically, and the Council hopes that its existence will help them greatly in the solution of their problems.

National Health Service.

An event of singular honour and importance to the Branch occurred with the return to power of the Menzies Government, when a member of our Branch, Dr. D. A. Cameron, replaced Sir Earle Page as Minister for Health. The congratulations of the Branch were extended to Dr. Cameron at a dinner given by the Council in his honour, and the thanks of the profession were also offered to Sir Earle Page for his immense public services over many years, and in particular his successful introduction of the National Health Service.

The Medical Benefits Scheme is working smoothly, and approximately one-third of the Queensland population is now enrolled.

Members of the medical profession are devoting a great deal of time and effort to the management of the largest registered organization, and it is undoubted that the success of the scheme in this State is due to their efforts.

The free provision of life-saving drugs is proving a boon to the community, though the Council has been concerned with the apparent recklessness of some doctors in the unnecessary prescription of antibiotics, with the resulting development of resistant strains of organisms to the great danger of the whole community.

The position of the Pensioner Medical Service is still indefinite.

Since October 31 last there has been no agreement of service. The Minister was unable to accept the rates desired by the Association, and in the meantime doctors are continuing to give service at the old rates of 10/- per consultation and 12/- per visit. It is essential that an agreement should be concluded in the near future.

The decision of the Minister not to proceed with the Pensioner Insurance Scheme will require a further modification in the definition of scope of service.

The Committee of Inquiry set up under the Act has functioned actively and the Queensland Committee has been selected by the Minister for special praise.

Your Council has stressed to the Minister that the maximum publicity should be given to the Committee's findings.

The Council was unsuccessful in its representations to the Government that when a doctor who has been called before the Committee is completely exonerated the expenses incidental to his attendance should be repaid by the Commonwealth.

Affiliated Local Associations.

Annual Conference.

The annual meeting of the Council with representatives of Local Associations was held on September 2. Delegates were present from six associations. Arising out of a general discussion of medico-political matters, recommendations were made to the Council regarding regional representation on

the Council of the Branch and measures to facilitate Workers' Compensation work. At the conclusion of the conference the visitors were entertained at luncheon at the United Service Club.

Bundaberg Local Association.

At a meeting of the Bundaberg Local Association on June 7, 1956, the office bearers for the year were elected. The position of President had been made vacant by the death of Dr. Egmont Schmidt, who had held the position for many years. Dr. L. McKeon was elected President. The Vice-Presidents are Dr. J. Scott and Dr. L. White; Treasurer, Dr. J. Hains; and Secretary, Dr. E. Schmidt.

During the year we have received visits from two lecturers through the Post-Graduate Medical Education Committee. They were Dr. N. McCallum and Dr. A. Harrison. These lectures are always very much appreciated by the members. Clinical meetings which were held regularly throughout last year have not been continued so far, but arrangements are being made in conjunction with the monthly meetings of the Local Association.

ERIC SCHMIDT,
Honorary Secretary.

Cairns Local Association.

Regular general meetings were held throughout the year, with excellent attendances. Two clinical meetings were also held.

We thank Dr. Alan E. Lee for his informative visit, also the Post-Graduate Medical Education Committee for the services of visiting lecturers, Dr. Yeates and Dr. J. G. Toakley and later Dr. F. W. R. Lukin and Dr. Robin Charleton. Sir Lionel Whitby was another welcome and refreshing visitor.

In June this Local Association had the privilege of conducting the North Queensland Medical Conference, attended by 110 doctors, many from far afield. This Northern Conference, initiated by the Townsville practitioners in 1954, and this year held in Cairns, promises to be a recurrent happy event. Mackay will be the venue for 1958.

President, Dr. C. H. Knott; Honorary Secretary, Dr. J. H. Barnes. Membership, 18.

J. H. BARNES,
Honorary Secretary.

Downs and South-Western Medical Association.

The annual meeting of the Association was held on September 16, 1955. The following office bearers were elected: President, Dr. D. F. Farmer; President-Elect, Dr. L. Fenwick; Past President, Dr. G. V. Hickey; Secretary-Treasurer, Dr. E. S. P. Ferguson; Committee: Dr. G. Hickey, Dr. A. McGregor, Dr. R. Spark, Dr. C. Morton, Dr. W. Morrison, Dr. R. McCullagh.

The annual dinner was held on October 22, 1955, at the National Hotel, the guest speaker being Dr. Alan E. Lee. Mr. Connal was unfortunately unable to attend owing to the death of his wife shortly before. Representatives of the legal and dental associations attended.

The year's activities included lectures by Dr. K. B. Fraser, Dr. Bruce Barrack, Dr. C. A. C. Leggett and Dr. Ian Burt, arranged by the Post-Graduate Committee, and also by Dr. W. S. C. Copeman, Chairman of the Empire Rheumatism Council. There was also a film evening made possible by the Department of Obstetrics, University of Sydney.

Visiting overseas doctor Dr. Brunschwig was entertained and lectured to us.

A well attended post-graduate week-end was held in May, our appreciation being due to the Post-Graduate Committee and to the lecturers—Professor Tyrer, Dr. Alan E. Lee, Dr. Murray Elliott and Dr. Grantley Stable.

A social function was held during the week-end.

The poliomyelitis campaign commencing July 16 has been well supported by local association members, who have been rostered to give the injections.

D. F. FARMER,
President.

Ipswich and West Moreton Medical Association.

Meetings of this Association were held at monthly intervals throughout the year. At the annual general meeting held in March, 1956, Dr. W. T. Gibbs was elected President for the coming year. Later Dr. S. Garozzo was elected Honorary Secretary.

The Association is very grateful to the Post-Graduate Medical Education Committee for the visiting lecturers. Lectures given throughout the year were as follows: July, 1955, Dr. R. B. Salter, "Lesions of the Cervix"; September, 1955, Dr. A. W. Steinbeck, "Nephritis"; October, 1955, Dr.

C. C. Wark, "Nasal Allergy and Sinusitis"; June, 1956, Dr. A. F. McSweeney, "Orthopedics as it Affects General Practice".

There was a clinical meeting in November, 1955, and a social gathering in December, 1955. The Association also wishes to thank the Hospital Board, Matron, and Medical Superintendent for making a lecture room available and providing supper after each meeting.

S. GAROZZO,
Honorary Secretary.

Mackay Local Medical Association.

Federal Council activities have been followed with more than usual interest during the past twelve months. The recent State Government Insurance decision has not been popular with this centre.

Local members lectured to the ambulance superintendents during their conference in Mackay in April.

The possibility of a superannuation scheme for Mackay practitioners has been under consideration for some months and opinion is still being sought locally about commencing such a scheme.

Most local practitioners have expressed their willingness to function in the Salk poliomyelitis campaign due to commence shortly.

Lecturers during the year have been Dr. A. G. S. Cooper, Dr. J. J. Fitzwater, and Dr. Kurt Aaron. Other visitors were Dr. H. Stuart Patterson on B.M.A. subjects, Dr. P. R. Patrick concerning the poliomyelitis campaign, and Dr. Norman Sherwood about British Medical Agency problems.

Local practitioners lectured as follows during the year: Dr. H. J. Taylor, "The Orbit and Exophthalmos"; Dr. P. Hopkins, "Ten Years' Obstetrics in a Country Private Hospital"; Dr. K. Whitehead, "The Catholic Church's Teachings on Contentious Subjects"; Dr. R. Courtice, "Some Aspects of Paediatric Allergy".

S. C. WILLIAMS,
Honorary Secretary.

Maryborough Local Medical Association.

The last annual general meeting was held on November 9, 1955, and the officers for the coming year were elected: President, Dr. E. L. Dunn; Secretary, Dr. A. J. Kelly; Representative to the Board of St. Stephen's Private Hospital, Dr. K. Pearson.

On May 19, 1956, a post-graduate meeting was held at the Maryborough Base Hospital. At this meeting Dr. N. V. Youngman gave an address dealing with "Drug Therapy in Psychiatric Practice" and Dr. P. Landy discussed "Some Commoner Neurological Disorders". The meeting was well attended and both lecturers were enthusiastically received by the members.

On May 21, 1956, the general practitioners of the town attended a special meeting of the local Branch held in the lounge of the Maryborough and Wide Bay Club Rooms to receive an address by Dr. R. Patrick, the Chief Medical Officer of the School Health Services, in which he outlined the programme for the forthcoming distribution of the Salk vaccine to school children in this district, and the part played by the local practitioners in this programme. He also answered various questions regarding Salk vaccine put to him by members.

On May 28, 1956, a special meeting was called to discuss the recent termination of the agreement between the State Government Insurance Office and the British Medical Association regarding workers' compensation. Certain resolutions were made and certain action was taken.

Special meetings were held on April 19 and May 3, 1956, to discuss the financial position of St. Stephen's Private Hospital in Maryborough.

A. J. KELLY,
Honorary Secretary.

Nambour District Local Medical Association.

In the clinical field this Association has remained active in so far as we have had regular lectures from visiting lecturers supplied by the Post-Graduate Committee and a most successful post-graduate week-end. We heartily recommend such week-ends to associations which as yet have not availed themselves of the excellent facilities obtainable from the Post-Graduate Committee in conducting such a week-end. Not only is it a huge success medically, but also of great benefit in bringing together from adjoining towns medical men and their wives.

On the medico-political and business side our discussions and correspondence have been multitudinous, and we cannot speak too highly of the readiness of the State Council to consider and to discuss our problems. They may at times have considered us as "temporary thorns in their sides", but where there is controversy so there will be progress,

and nothing but good has come out of all our seemly troubles. Our Association feels that better liaison is a "must" between Council and local associations and is right behind a regional representation that will be acceptable to all parties.

Our office bearers for the year are: President, Dr. H. L. Kesteven; Secretary-Treasurer, Dr. J. E. Trotter.

J. E. TROTTER,
Honorary Secretary.

Rockhampton District Local Association.

This Association has not been as active during this year as it has been during previous years. Scientific meetings were held monthly during the first six months. However, with the change of the resident staff at the General Hospital these have been less frequent. It is hoped that they will be resumed next year.

The week-end post-graduate course extending over three days was well attended by members. All members expressed the opinion that these longer courses were preferable to the shorter visits that were previously made by the post-graduate lecturers.

The annual dinner and the Christmas cocktail party were well attended by members.

Members have cooperated in the examination of the National Service trainees and in the vaccination with the Salk vaccine.

The present membership is 44 and the executive officers were Dr. W. E. Hasker, President; Dr. E. R. Watkins, Vice-President; and Dr. J. F. Gillogley, Secretary-Treasurer.

J. F. GILLOGLEY,
Honorary Secretary.

South Burnett Medical Association.

During the year five meetings were held and we had interesting lectures from Dr. J. de Vidas, Dr. Fergus Yeates, Dr. Douglas Friend, Dr. K. Cockburn and Dr. A. Inglis. We thank these gentlemen for coming all this way to help us with their valuable contributions.

K. W. SHAW,
Honorary Secretary.

South Coast Local Association.

Seven meetings, including five clinical meetings, have been held during the year. There are 13 members of this Association and average attendance at meetings has been eight. Clinical meetings have been both enjoyable and profitable and lectures have been received from Dr. E. W. Abrahams, Dr. Brian Courtice, Dr. Peter Grant and Dr. Ellis Murphy.

It is proposed to hold a Local Association dinner for members and their wives.

J. H. GRANT,
Honorary Secretary.

Townsville Medical Association.

During the year 1955-1956 the Townsville Branch held the following meetings: 12 clinical, three business, two film evenings, one medico-legal.

Post-graduate lectures were given by Dr. Harold Love, Dr. Derick Yeates, Dr. Robin Charlton and Dr. F. W. R. Lukin. These lectures, organized by the Post-Graduate Medical Education Committee, were greatly appreciated.

In addition we had the privilege of hearing an address on "Anæmia" by Sir Lionel Whitby.

Meetings and lectures in general were well attended and the usual high standard of the clinical meetings was maintained by the cooperation of the hospital staff.

A medico-legal meeting, lecture and social was a great success and it is proposed to make this event an annual one. During the year members freely volunteered for the examination of National Service trainees and almost the entire membership is included on the roster prepared for the Salk vaccination campaign.

Finally, the Branch was particularly active socially. In all, eight social functions were held during the year.

R. W. HAY,
Honorary Secretary.

General Practitioner Group (British Medical Association).

The only activity of the General Practitioner Group of the British Medical Association during the past year was a special general meeting of general practitioners on June 15, 1956, to consider their representation on the British Medical Association Council at the forthcoming election.

ROBERT MILLER,
Acting Honorary Secretary.

Ophthalmological Society of Australia (British Medical Association).

This section has held three meetings to date. The main matters dealt with have been: (1) Arrangements for the Ophthalmological Society of Australia annual general meeting in Brisbane in July. (2) Adoption of a list of "average fees". (3) Setting up a reference library. (4) Investigation of ophthalmic teaching in the University of Queensland. (5) Our attitude to optometrists. (6) Arrangements for the remanufacture of oculets physostigmine.

Two papers have been given: "Controversial Points from Overseas", by Dr. H. P. Spiro, and "Subarachnoid Hæmorrhage" by Dr. G. Toakley.

B. G. WILSON,
Honorary Secretary.

Sections for Study of Special Branches of Medical Knowledge.

Pædiatric Section.

There are 20 members of this section, the Chairman being Dr. P. A. Earnshaw and the Secretary Dr. N. G. Anderson.

Clinical meetings are held alternately at the Mater Children's Hospital in October and at the Hospital for Sick Children in June.

A business meeting was held on June 19, 1956.

N. G. ANDERSON,
Honorary Secretary.

Radiological Section.

There are 19 members in this group.

Two clinical meetings were held during the year. We regret to report the death of Dr. J. W. Heaslop, who was one of the original members of this Section.

A great deal of work has been undertaken to organize the annual meeting of the College of Radiologists to be held in Brisbane from August 20 to 25. The Committee is Dr. A. G. S. Cooper (Chairman), Dr. B. L. W. Clarke (Secretary), Dr. J. H. Hood, Dr. H. Masel, Dr. R. Row, Dr. C. W. Uhr.

B. L. W. CLARKE,
Honorary Secretary.

Section of the History of Medicine.

This year there has not been much activity in this section, but a few exhibits have been sent in by members for the Marks History of Medicine Collection at the Medical School.

The Committee is anxious to hear from any of the members who are interested in medical history so that occasionally meetings can be arranged to discuss recent discoveries in the field of the history of medicine, ancient and modern, namely articles and reports in the current literature of old manuscripts, books or instruments, recent acquisitions to the historical collection at the University, such as books, papers or instruments, and items of interest such as letters, photographs *et cetera* associated with the medical history of Queensland.

Recent graduates who are interested are specially invited to get in touch with the Secretary, so that they can be notified of any meetings which may be held.

G. B. MURPHY,
Honorary Secretary.

British Medical Agency of Queensland Pty. Ltd.

Directors: Dr. Norman Sherwood (Chairman), Dr. J. G. Wagner, Dr. H. W. Horn, Dr. A. E. Mason, Dr. G. A. McLean, Dr. A. F. McSweeney, Dr. L. J. J. Nye, Dr. B. N. Adsett.

The Agency suffered a great loss by the death of Dr. R. G. Quinn, who was a foundation member of the company and Chairman during the past eight years.

At this time of the year, when Queensland climatic conditions may be considered at their best, inquiries for the services of *locum tenens* are curtailed and supply is at least equal to demand. This may give a false impression and lead to the belief that members may expect to obtain their locum requirements as desired. However, the stronger *locum tenens* demand from August onwards has never been satisfactorily met since the end of World War II and once again the position appears unaltered. There are practically no doctors in Queensland doing full-time locum duties as compared to the 10 to 15 doctors acting in his capacity before World War II.

The partnership, associationship and assistantship field is now more limited than in the past; however, opportunities are still available both in city and country.

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION.
(INCORPORATED.)

Revenue Account for Twelve Months ended June 30, 1956.

EXPENDITURE.		£	s.	d.	£	s.	d.
1956—June 30—							
To Branch Expenses		3,724	9	3			
.. Library Expenditure		335	12	8			
.. Depreciation of Equipment		43	4	11			
					4,103	6	10
.. Valuation and Survey Fees—Herston							
.. Property			120	8	0		
.. Provision for Staff Superannuation			120	0	0		
.. Loss on Sale of Investments			244	15	9		
.. Federal Council—Capitation Fees			1,395	0	0		
.. Post-Graduate Grant			400	0	0		
.. Property Expenses—British Medical Association House, Bartley Street House and Herston—							
.. Depreciation	£81	9	10				
.. Other Expenses	908	5	4				
					989	15	2
.. Less Rents Received			670	8	0		
					319	7	2
.. Net Surplus for Year—Transferred to Accumulation Account					2,258	16	7
					£8,961	14	4

INCOME.		£	s.	d.	£	s.	d.
1956—June 30—							
By Branch and Organization Fund—Subscriptions					7,874	16	2
.. Portion of Journal Subscriptions—To be Invested in Australasian Medical Publishing Company Limited, Sydney, Series "E" Debentures					578	5	0
					8,448	1	2
.. Interest—							
.. Southern Electric Authority of Queensland Inscribed Stock		85	0	0			
.. Australasian Medical Publishing Company Limited Debentures and Funds Held		110	14	8			
.. Commonwealth Government Inscribed Stock		58	10	0			
					254	4	8
.. General—							
.. Proceeds Clerical Assistance and Sundries		208	0	0			
.. Directors' Fees—Yorkshire Insurance Company Limited		50	0	0			
.. Sale of Diet Sheets		1	8	6			
					259	8	6
					£8,961	14	4

Ten graduates have been assisted in arranging their post-graduate activities overseas, and many others have been advised in this regard. A review of the achievements of assisted graduates during the last five years proved most gratifying and indicates the high standard attained by practitioners assisted by the Committee.

Proposals for the post-graduate education of Asian graduates of Colombo Plan countries have been carried a stage further by the visit to Australia of Dr. R. H. Bland and Professor E. S. Monterio of the University of Malaya.

Investigations are continuing regarding the advisability of establishing a correspondence course suitable for general practitioners in Queensland.

The Queensland Committee is cooperating with the Australian Post-Graduate Federation in Medicine in an endeavour to correct the misuse of antibiotics observed in some spheres of medical practice.

The following lecturers have visited Brisbane and lectured under the auspices of the Committee: Dr. W. S. C. Copeman (London), Dr. F. R. Winton (London), Dr. J. Brown (Edinburgh), Dr. Kate Campbell (Melbourne).

Country centres have been visited by various lecturers for the Committee, as in previous years: Bundaberg (2), Dalby (3), Gayndah (2), Gympie/Maryborough (4), Ipswich (6), Nambour (5), Mackay/Rockhampton (4), Townsville/Innisfail/Cairns (4), South Burnett (4), South Coast (4), Toowoomba (6), Warwick (3). In addition, full week-end courses have been conducted in Toowoomba, Nambour and Rockhampton. These courses have proved very successful and will be continued.

Post-graduate week held in August last year was curtailed, owing to the close proximity to the British Medical Association Ninth Congress, held in Sydney. Nevertheless, the lectures were generally well attended.

The courses of weekly lectures in advanced surgery and medicine have continued throughout the year. Attendance at the surgical lectures has recently proved rather disappointing, and unless there is some improvement consideration will be given as to the advisability of their continuance. Medical lectures have been very well attended.

Once again the Committee extends sincere appreciation to the numerous lecturers who give their time gratuitously in the preparation and delivery of these excellent courses.

Several lectures on tape recordings are now available for loan to country centres. A list will be forwarded upon request and country centres are asked to consider making greater use of this service. Most lectures have accompanying slides.

During the year the Committee suffered severely by the untimely death of two of its most active members, Dr. R. G. Quinn and Dr. A. V. Meehan. For many years Dr. Meehan had acted as Chairman of this Committee and the field of post-graduate education had been one of his major interests.

At present the possibility of establishing an annual "A. V. Meehan Memorial Lecture" is being investigated in association with the Queensland Regional Committee of the Australian Orthopaedic Association.

Once again the assistance given by the staff of the British Medical Association and the British Medical Agency during the year has been deeply appreciated.

GRANTLEY STABLE,
Director, Post-Graduate Studies.

Queensland Health Education Council.

The Queensland Health Education Council, on which the British Medical Association is represented, is very much alive to the fact that to train people to be very anxious about their health is to set them on the road to ill health. Pamphlets, posters, newspaper articles and radio broadcasts are used freely, while the mobile film unit shows some very good films over most of Queensland. New positive methods are being considered where careful use is made of motivation and other weapons of education.

Federal Council.

Two meetings were held during the year—in Sydney and in Hobart. The Branch was represented on each occasion by Dr. Harold W. Horn and Dr. Alan E. Lee. The Branch congratulates Dr. H. Cecil Colville on his accession to the office of President of the Council.

World Medical Association.

The increasing importance of this Association was brought to the attention of members by the visit to Australia of the Secretary-General, Dr. Louis H. Bauer. The Branch was honoured by his visit to Queensland and by his delivery of the Bancroft Oration in August last.

Australasian Medical Congress (British Medical Association).

The Ninth Session was held in Sydney in August, 1955, and was a great success in every way. The membership from Queensland numbered 90.

The Tenth Session is to take place in Hobart in March, 1958.

"The Medical Journal of Australia."

The Editor, Dr. Mervyn Archdall, paid an official visit to Brisbane in August last, and attended the annual meeting of the Branch. The Deputy Editor, Dr. R. R. Winton, an ex-member of the Branch, is at present overseas.

Australasian Medical Publishing Company, Limited.

At meetings of directors, held in Sydney and Hobart, matters referred from the Branch Council were brought forward by the Queensland director, Dr. Alan E. Lee.

Cathedral Service.

At the invitation of the Dean, a service for doctors was held in Saint John's Cathedral on Saint Luke's Day, October 16, 1955. The service was largely attended and the lessons were read by Sir Alexander Murphy and the President. It is proposed to hold a similar service this year.

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION.
(INCORPORATED.)

GENERAL FUND.

Statement of Receipts and Payments for Twelve Months ended June 30, 1956.

RECEIPTS.		£	s.	d.	£	s.	d.	PAYMENTS.		£	s.	d.	£	s.	d.
1955—July 1—								1956—June 30—							
To Funds at July 1, 1955—								By Amounts Remitted on Account of Sub-							
English, Scottish and Australian Bank								scriptions Collected to—							
Limited—Current Account		4,462	14	4				British Medical Association, London ..		1,914	10	2			
Cash		15	16	7				Australasian Medical Publishing Company							
					4,478	10	11	Limited, Sydney—							
1956—June 30—								Publication of Journals		630	18	5			
To Subscriptions—								To be Applied to Purchase of Series							
Queensland Branch Subscriptions ..		5,948	14	8				"E" 3½% Debentures		578	5	0			
Organization Fund, Queensland Branch		1,926	1	6				Medical Students' Loan Fund		60	11	0			
For Remittance to British Medical								World Medical Association		62	4	0			
Association, London		1,917	12	11									3,241	8	7
For Remittance re Medical Journals ..		1,202	0	11				Federal Council—Capitation Fee (1956) ..					1,395	0	
Medical Students' Loan Fund		60	11	0				Branch Expenses—							
World Medical Association		62	4	0				Salaries, Audit and Honoraria		2,605	0	1			
					11,117	5	0	Printing, Stationery, Postages and Tele-							
General—								phone		537	17	1			
Building Fund—								Bank Charges, Functions, Lighting and							
Subscriptions		£216	9	6				Sundries		581	12	1			
Transferred from Sinking		1,730	0	0									3,724	9	8
Fund					1,946	9	6	Property Expenses—							
Rents—								British Medical Association							
British Medical Associa-								House—							
tion House		310	0	0				Rates and State Land							
Bartley Street Property		218	8	0				Tax		£426	9	1			
					528	8	0	Insurance, Repairs and							
Clerical Assistance and Hire of Office								Maintenance		220	19	0			
Equipment					208	0	0						647	8	1
Interest on Southern Electric Authority of								Bartley Street Property—							
Queensland Inscribed Stock					85	0	0	Rates and State Land							
Australasian Medical Publishing Company								Tax		46	2	2			
Limited—								Insurance, Repairs and							
Interest on Funds Held		£6	14	8				Maintenance		22	15	8			
Interest on Debentures		104	0	0									68	17	10
					110	14	8	Herston Property—							
Interest on Commonwealth Inscribed								Rates and State Land							
Stock					58	10	0	Tax		95	0	0			
Directors' Fees — Yorkshire Insurance								Cleaning and Gardening		64	7	0			
Company Limited					50	0	0						150	7	0
Proceeds Sale of Diet Sheets and Lists of								Bartley Street Vacant Land—							
Members					1	8	6	Rates and State Land							
Proceeds Sale of Investments—								Tax		32	12	5			
Australian Consolidated													908	5	4
Inscribed Stock—Sinking								Purchase of Herston Property					20,278	3	11
Fund		£2,050	2	3				Bartley Street Lane—Purchase of Land and							
Australian Consolidated								Expenses of Closure					97	17	9
Inscribed Stock		1,680	8	3				General—							
Southern Electric								Post-Graduate Grant		400	0	0			
Authority Inscribed								Library Expenditure		335	12	8			
Stock		1,874	16	0				Transfer to Superannuation Fund ..		120	0	0			
					5,605	6	6	Purchase—Furniture and Equipment—							
English, Scottish and Australian Bank								Motor Mower and Garden							
Limited—Overdraft at June 30, 1956 ..								Tools		£35	5	5			
					6,578	17	9	Filing Cabinets		56	0	0			
								Office Furniture		15	10	0			
													136	15	5
								Valuation and Surveying Fees—Herston							
								Property		120	8	0			
								Deposits—Herston Property		8	0	0			
													1,115	16	1
								Cash on Hand at June 30, 1956					7	9	11
													£30,768	10	10

Entertainment.

During the year the following were entertained at dinner by the Council: Dr. Louis H. Bauer, Dr. A. Talbot Rogers, and the Commonwealth Minister for Health, Dr. Donald A. Cameron.

The sixty-first annual general meeting of the Branch was held at the University of Queensland, St. Lucia, on Saturday, September 3, 1955, at 8.30 p.m., in the presence of His Excellency the Governor, Sir John Lavarack, and Lady Lavarack, and a good audience of members and their friends.

At the conclusion of the meeting the guests were entertained at supper in the Entrance Hall.

Golf Match.—The annual golf match between members of the Australian Dental Association and the British Medical Association, which took place in October, was won for the first time in three years by the British Medical Association, and the Phillips Cup has been held by the Branch during the year.

Congratulations.

During the year various honours were conferred upon members of the Branch, who are to be congratulated: Dr. T. A. Price, Vice-President of the Branch, on the recognition of his valuable services to the community, shown by the opening of the "Price Memorial Centre" in Toowoomba;

Dr. Donald A. Cameron on his appointment as Minister for Health in the Commonwealth Government; Dr. John G. Hunter on the award to him of the gold medal of the British Medical Association in Australia; Dr. Otto S. Hirschfeld on his reappointment as Chancellor of the University of Queensland; Dr. K. B. Fraser and Dr. N. G. J. Behan on their election to the Senate of the University.

Following his resignation as a member of the Council, Dr. T. V. Stubbs Brown was appointed by the Branch Council as a member of the Medical Board of Queensland to replace the late Dr. R. G. Quinn.

Conclusion.

With the rapidly increasing growth of the Branch membership, the work required of the Council is becoming very onerous. It is probable that medical secretaries were appointed to the two senior Branches in Australia when their membership was smaller than is ours, and the time is close when a review of the Branch organization will become imperative. Meanwhile, the duties that would be undertaken by a full-time medical secretary must be shared by the President, the Honorary Secretary, and various committees of the Council. I cannot praise too highly the efficient manner in which Council members have performed these honorary functions, nor the assiduity with which they have attended the long fortnightly Council meetings.

During the year practically every facet of professional life has received some attention from the Council.

Much anxious thought has been given to economic considerations arising from the continued depreciation in the value of money. The nature of the recommendations resulting therefrom appear in the body of the report.

Various specialist groups have brought their problems to the Council and they have been helped towards a solution.

Acting through the Federal Council all aspects of the National Health Service have received attention, as has also the position of Repatriation medical officers.

In the State sphere the position of part-time superintendents in country hospitals, and the relation of private practitioners to these hospitals, has been discussed with officers of the Department of Health, as has been the unsatisfactory conditions of medical officers in the Queensland Radium Institute.

Workers' compensation matters have rarely been absent from the Council agenda.

The relationship of Local Associations to the Council has received a good deal of consideration, and especially whether some degree of regional representation might increase Council efficiency.

Despite all these activities, the scientific side of Branch work has received full attention. In August last we were privileged to welcome, as Bancroft Orator, Dr. Louis Bauer, Secretary-General of the World Medical Association.

The papers read at monthly Branch meetings have maintained a high standard, and a number of distinguished overseas lecturers, sponsored either by the Medical Post-Graduate Committee or other bodies, have attracted large audiences.

The Council congratulates the Cairns Local Association on the success of their recent medical conference.

Finally, the purchase of a new home for the Branch, while a matter of great satisfaction, has provided its own problems. Its development has required much consideration, and the Chairman of the Building and Maintenance Committee, Dr. L. J. J. Nye, to whom, along with the other Committee members, our thanks are due for continuing unselfish service, has been a frequent attendant at Council meetings.

It is hoped that plans to make this a centre at least equal to that possessed by any other Branch will come to early fruition.

To the Chairman of Council, Dr. W. J. Saxton, the Honorary Secretary, Dr. Daniel Hart, and other executive members our best thanks are offered for efficient service.

To Mrs. Spooner and her office staff one can only say that without their unflinching help the work of the Branch would be impossible.

To my distinguished paediatric colleague, Dr. Felix Arden, I wish a very happy year in office.

ALAN E. LEE,
President.

BALANCE SHEET.

The balance sheet and financial statement were presented by the Honorary Treasurer, Dr. J. G. Wagner, who drew attention to the fact that renovations to the new British Medical Association House would involve considerable expenditure in the coming year. The report was adopted.

OFFICE BEARERS AND COUNCILLORS.

It was announced that the following members had been elected as office bearers for 1956-1957:

President: Dr. Felix Arden.

President-Elect: Dr. L. A. Little.

Past President: Dr. Alan E. Lee.

Honorary Secretary: Dr. W. D. Friend.

Councillors: Dr. A. P. Crawford, Dr. D. R. L. Hart, Dr. D. C. Jackson, Dr. R. Miller, Dr. H. S. Patterson, Dr. Derek Sapsford, Dr. N. V. Youngman. The following Councillors, elected in 1955 for two years, continue in office: Dr. B. N. Adsett, Dr. A. F. Knyvett, Dr. John Nye, Dr. Charles Roe, Dr. W. J. Saxton, Dr. J. G. Wagner, Dr. Donald Watson.

ETHICS COMMITTEE.

The following members were elected to the Ethics Committee of the Branch: Dr. B. L. W. Clarke, Dr. F. W. R. Lukin, Dr. L. J. J. Nye, Sir Alexander Murphy, Dr. J. J. Power, Dr. Norman Sherwood, Dr. W. H. Steel.

ELECTION OF AUDITORS.

Messrs. R. G. Groom and Company, Chartered Accountants (Australia), were reelected auditors for the ensuing year.

VOTES OF THANKS.

Votes of thanks were passed to the Secretary, Mrs. Spooner, who will shortly be completing forty years' service in her present capacity, and to her office staff.

ADJOURNMENT OF MEETING.

The official business completed, the meeting was adjourned. It was continued as a ceremonial gathering in the evening, in the Main Hall of the University of Queensland, in the presence of the wives of councillors and members and a number of distinguished guests.

MEMORIAL ROLL.

After the President, Dr. Alan Lee, had welcomed the visitors, the Honour Roll of the Queensland Branch was read by the Past President, Dr. H. S. Patterson.

ADDRESS BY DR. J. H. SHELDON.

Dr. J. H. Sheldon, of Wolverhampton, who is visiting Australia at the invitation of the Post-Graduate Committee in Medicine, was introduced by the President, and addressed the gathering in a quietly humorous style on the subject of "old age".

PRESENTATION OF PRIZES.

The following prizes awarded to medical graduates for 1955 were presented:

Memorial Prize of the Queensland Branch of the British Medical Association: Dr. D. J. Brand.

Harold Plant Memorial Prize: Dr. Barry Nurcombe.

INDUCTION OF PRESIDENT.

The retiring President introduced the incoming President, Dr. Felix Arden, and vacated the chair in his favour.

PRESIDENT'S ADDRESS.

The incoming President, Dr. Felix Arden, delivered his president's address (see page 549).

Out of the Past.

In this column will be published from time to time extracts, taken from medical journals, newspapers, official and historical records, diaries and so on, dealing with events connected with the early medical history of Australia.

GOVERNMENT AND GENERAL ORDER.¹

July, 1802.

MR. JAMES THOMSON Staff Surgeon of Norfolk Island having obtained the Governor's permission to return to England by an early opportunity for the recovery of his health and on his private concerns, with one years leave from his arrival in England until he reembarks for this Settlement, Mr. Darcy Wentworth next in seniority will do the duty of Staff Surgeon at Norfolk Island until Mr. Thomson's return or that the return of Mr. William Balmain renders it necessary for Mr. Thomas Jamison to resume that situation. As the number of medical men in the Colony will not admit of Mr. Thomson's leaving it without finding a person to do his duty, and (he) having engaged Mr. Charles Throsby for that purpose, this gentleman is allowed to do Mr. Thomson's duty until his return.

Mr. D. Wentworth will hold himself in readiness to embark for Norfolk Island in about three weeks.

It is to be understood that not less than three commissioned Staff Surgeons are to be resident in the Colony and at Norfolk Island which regulation will allow of two being absent on leave.

Mr. D. Wentworth will be recommended for the pay of Staff Surgeon of Norfolk Island from the day he takes that charge until superseded by Mr. Jamison or Mr. Thomson.

PHILLIP GIDLEY KING.

¹ From the original in the Mitchell Library, Sydney.

Correspondence.

THE MEDICAL BENEFITS FUND OF AUSTRALIA.

SIR: Dr. Shineberg (*THE MEDICAL JOURNAL OF AUSTRALIA*, September 15, 1956) has once again advanced the plea that the Medical Benefits Fund should return to doctors the ten pounds which many subscribed in order to establish the Fund. While it is undoubtedly true that the Fund could afford to do this, the profession should realize that there is no provision in the articles of association of the Fund for the return of this money.

What is more important, however, is for the profession to realize that this, the largest and the most progressive of the medical benefits organizations, was not only founded by the medical profession, but that it is controlled and directed by the profession. The doctors who have subscribed their ten pounds become medical members of the Fund, and are the only persons eligible to stand for election to the Council of the Fund, or to vote for those who stand for election. I would like to submit that it should be worth ten pounds to be in this favoured position, and would like to urge all medical practitioners who are not medical members to become such, and to take an active part in the election of councillors.

This organization has already proved its worth, despite the gloomy forecasts of many doctors when it was founded, and despite the many criticisms which may still be levelled at certain minor facets in its administration. It is an organization of which the profession and the people of Australia should be proud, and it is constantly attempting to iron out deficiencies and anomalies, so that it may move forward to ever greater achievements in the provision of insurance against medical expenses for its contributory members. I would like to inform members of the medical profession that the estimated combined coverage of the Medical Benefits Fund of Australia is approaching two million persons, and to remind them that without its help many of the patients who are at present electing to have their own doctor attend them as private patients when in hospital, would be asking for public ward accommodation, and perhaps attending out-patient departments for ordinary medical care in order to save expense.

When one considers that this vast organization is controlled by little more than one thousand medical members, one cannot help feeling that the profession should be jealous of its privileged position in this regard, and that all practising doctors should be anxious to contribute the ten pounds needed to make them active participants in its control.

Yours, etc.,

Sydney,
Undated.

E. S. STUCKEY.

STERNAL PUNCTURE: ITS INDICATIONS AND LIMITATIONS.

SIR: I have read with interest the original paper, "Sternal Puncture: Its Indications and Limitations" (*M. J. AUSTRALIA*, July 28, 1956), and also Dr. Kertesz's comments (*M. J. AUSTRALIA*, September 8, 1956).

I agree with the original writers, and I also agree with Dr. Kertesz's comments, particularly as they relate to marrow examination in children.

However, I do not agree with him in connexion with marrow cell counts. I think they might be reasonably accurate even between one operation and another, theoretically, at least, with regard to trephine samples, but not with regard to puncture specimens.

It is impossible to apply the same pressure to the piston of the syringe every time, and the sample is drawn into the syringe with ease in some cases and with difficulty in others. In the latter, even though one aims to obtain only one-quarter of a millilitre as a routine, the increased pressure sometimes required would tend to dilute the sample with blood. The sample usually contains clumps of marrow cells which in themselves are difficult to count accurately and, moreover, may be more than one cell thick.

Further, a large clump of marrow cells may block the counting pipette, and blood may be sucked up instead of marrow. These will give erroneous results, and if it is not reasonably accurate from one operation to another, I do not

think it justifies consideration. While the variation between experienced operators of peripheral blood counts can be marked, there is some correlation.

As marrow puncture is a more minor procedure than trephine and so preferred to the latter as a routine, I do not think there is any place from a practical point of view for marrow cell counts in absolute numbers, but a differential count may be useful sometimes.

Yours, etc.,

JOHN SQUIRES, Pathologist.

Repatriation General Hospital,
Brisbane,
September 17, 1956.

ELECTRO-CONVULSIVE THERAPY.

SIR: We have noted that if the shock is subliminal and apparently inadequate to produce a fit, the fit can be produced by placing the upper limb in extension and holding it there until a delayed fit occurs. The fit cannot always be produced by this manoeuvre. One of us (S.J.C.) has noted the same phenomenon with "Cardiazol" therapy. No explanation is offered for this phenomenon, except that the fit is produced by the summation of stimuli or by the process of facilitation.

Yours, etc.,

S. J. CANTOR,
N. R. PATTERSON.

Lachlan Park Hospital,
New Norfolk,
Tasmania.
September 16, 1956.

THE UPSURGE OF THE SAVAGE.

SIR: The logic in the leading article of this journal of September 1 disappoints me. It is argued that the intellect of the "preteen age" aboriginal child is equal to and "often excels her white school-fellows in quick perception and retentive memory". When the child enters the teenage her primitive instincts prevail and she joins her people and becomes a "scarred and verminous savage with pendent breasts nursing a baby". Later in the article it is suggested that vandalism and delinquency in white children is merely the appearance of innate savagery which has not been "deftly held in check". The implication behind this reasoning is that delinquency is the normal way of life of the so-called primitive people. In my opinion nothing is further from the truth.

The uncontaminated tribal life of the Australian aborigine does not include orgies of sexual licence nor is vandalism tolerated. Frederic Wood Jones has this to say about their tribal organization:

He has evolved a table of kindred and affinity so complicated that few white men have ever understood it, and yet which all must admit to be, in its workings, a perfect marriage code that ensures morality and safeguards the eugenic welfare of the race.

He has formulated tribal laws competent to deal with every aspect of tribal life and to regulate all the social activities of the individual; and by this system of communal authority he has established a form of government ideally fitted to ensure the welfare of the community. . . . This social code is, in many ways, far more exacting and far more rigid than are the inhibitions of the white man. It would, therefore, be well if the white man would respect the tribal organization of the native and refrain from any attempt to break it down or undermine it in the name either of the white man's religion or the white man's law.

In the same book Wood Jones gives the reason why these people (our intellectual equals in my opinion) have not progressed beyond the stage of culture of a stone-age hunter—namely:

. . . the progress from the phase of the nomadic hunter towards a higher civilization has always been made by way of the development of agriculture and husbandry, by the attainment of a settled mode of life such as this entails and by the accompanying leisure and the development of foresight, begot of the seasonal phases of an agricultural and pastoral existence. These things were denied to the Australian by the very nature of his new home. Australia possessed no animals that could

be domesticated and brought into the service of man as beasts of draught or burden; or even any that could be bred and conserved as a source of food. It possessed no native plants that were readily taken into cultivation for the benefit of the primitive agriculturist. Indeed the white colonist has made no more conservative use of the native animals and plants of Australia than did the aborigine, for in no single instance has he adapted to his needs any animal or plant indigenous to Australia. All that can be said for the white colonist (in this regard) is that by a thoroughly vandalistic policy he has made profit out of the destruction of the native fauna and flora.

The aboriginal girl rejoins her tribe, not because of her savage inherited instincts, but because she becomes conscious of the white man's colour bar and seeks social equality and happiness.

Delinquency in our teenagers is due to entirely different reasons. It is a symptom of the decadence of our own society. Another symptom of the decadence of our "civilized" society is the un-Christian-like attitude of many white people to the coloured races.

We who have been trained in the medical sciences can do a lot to improve this attitude, for we should know that these people are our biological equals in every way, and that their dark skin is merely the inheritance of the acquired character of suntan.

Yours, etc.,

83 Highett Road,
Hampton,
Victoria.

BARRY CHRISTOPHERS.

September 5, 1956.

Reference.

WOOD JONES, F., "Australia's Vanishing Race", 17:18.

VERTEBRAL DISK LESIONS.

SIR: In the past few years we have seen many words printed *re* lumbar and cervical disk lesions, these mainly concerning diagnosis and treatment, but there have been few words about prevention.

Could I suggest that a possible cause of this symptom complex is a deformity causing a tilting of the pelvis and a compensating scoliosis? The deformity—an inequality in the length of the two legs.

Recently I have been looking for an inequality, and in all patients seen with symptoms of the above diseases there is a gross inequality ranging from half to one and a half inches. I have suggested to these patients that raising the heel on one shoe could equalize the difference in the length of the leg.

It would seem that the scoliosis produced causes no symptoms until some physical or mental stress intervenes. The physical stress is easily noted, but recently I have found that my oldest and dearest neurotics are suffering from pain, probably as a result of their definite scoliosis and resulting nerve pressure. An X ray of the pelvis with the patient standing, without shoes, will reveal a definite elevation of one iliac crest in relation to the other.

Perhaps this fact could be investigated in a large clinic with more facilities than are present in my own country practice.

Yours, etc.,

Bordertown,
South Australia,
September 27, 1956.

SYDNEY BIRDSEYE.

THE TRAINING OF SURGEONS.

SIR: At a recent primary examination of the Royal Australasian College of Surgeons held in Sydney, 10 out of 21 candidates were successful. This is a very high pass rate, for which an explanation might be sought.

Five of the successful candidates are working as half-time salaried demonstrators in the Department of Anatomy. At the beginning of the year Professor Macintosh appointed eight such demonstrators for a year. He chose them on a quota basis from the teaching hospitals. His aim was to gain the services of men with a high objective and to give to them the untold advantages of working together in his

department. He made candidature for the primary examination a condition of appointment. Six of these sat, and five were successful. This is an extraordinary success for any group, and is a great testimony to the value of the method.

The Professor of Anatomy is anxious to continue his system of annual appointments, and there is no doubt that competition for these posts will be keen. We hope that more such posts may be created. This is a most effective start in the planning of a complete programme for surgical training in Sydney.

It is to be hoped now that the teaching hospitals, who have so much to gain, will appreciate the value of this step and prepare to pay a greater part in the integration of the academic and professional training of their men who aspire to surgical careers.

Part-time registrarships in various hospital departments during the demonstrator year, and full-time registrarships in surgery after the primary and in preparation for final qualification, would make a basis of training which should produce a steady supply of men thoroughly grounded and highly tested in the art of surgery.

Such a system would rescue us from the haphazard and rather unorganized methods which at present hold in the training of our surgical specialists.

Yours, etc.,

DOUGLAS MILLER,
Vice-President, Royal Australasian
College of Surgeons.

149 Macquarie Street,
Sydney,
September 25, 1956.

THE TEACHING OF ANATOMY.

SIR: The subject of anatomy has for many years been a basic part of the knowledge of a doctor. Its importance has been under review in recent years, and in some American schools it has been greatly reduced in detail and importance. It cannot possibly be denied that the anatomist is father to the surgeon, and that in a medical school which hopes to produce competent surgeons, the teaching of anatomy should not be allowed to decline. A knowledge of anatomy, moreover, is of value to every doctor, in view of the fact that his anatomical knowledge is at his service at all times in diagnostic problems.

The standard of anatomy taught to medical students clearly must be that standard which, when certain portions are forgotten, as they always are, there remains a residual conception of anatomy which will serve the needs of a person whose life is spent in the diagnosis and treatment of disease. The subject of anatomy itself extending throughout the animal kingdom, and through the history of our own species, is a wider subject than this, but the standard which is required by medical students has been interpreted in the books of anatomy which we have used for years. More recent books on anatomy have modified to some extent the presentation of the subject, but by and large the standard is the same, at least among the good books.

It is a pity therefore that when a medical student at the end of his third year passes an examination in anatomy, he does not again have to make any effort to revise the subject, unless he should choose to take a higher degree in surgery. By the time the average medical student qualifies he has forgotten too much of his anatomy, and he has forgotten it because of the anxiety and pressure of all the other subjects which he has to learn. There is accordingly a terrible waste of the time and effort which he has put in his second and third years into learning his anatomy, and how much better off he would be in his later life if this had not occurred!

The great thing is not to lose the knowledge of anatomy acquired in the second and third years, and the way to avoid this is to revise it. Anatomy should be under constant revision if one is to know it, and especially among students who aspire to become surgeons, it is of very practical importance for them to revise their anatomy, because when the time comes to sit for their fellowship examinations they will have to learn the subject again.

In any medical school the subject of anatomy and its teaching is or should be under the direction of the professor of the subject in the faculty, and I would suggest that teaching hospitals should each have a member of the staff interested in anatomy, who is officially given the function of conducting a revision programme for fourth, fifth and sixth year students in their anatomy. He should in this activity work under the direct authority of the professor of

anatomy, who should make it his business to attend to the maintenance of this revision course. A necessary stimulus must exist and should, I feel, consist in the inclusion each year of one anatomy question in one of the examination papers. It could be the surgery paper.

A medical school has always gained great status from the reputation that its graduates are all very well versed in anatomy. It is a classic in medicine and is part of the knowledge of an educated doctor.

Yours, etc.,

W. SCOTT CHARLTON.

149 Macquarie Street,
Sydney,
October 2, 1956.

THE USE OF RESERPINE, CHLORPROMAZINE AND ALLIED DRUGS IN MEDICINE AND PSYCHIATRY.

SIR: I have only just had an opportunity to read the reports on the use of chlorpromazine and allied drugs in the Parramatta Mental Hospital. I should like very much to congratulate both the authors on the excellence of these two articles (June 23, 1956). They are the most comprehensive and instructive that have yet appeared in the medical journals of Britain and the Commonwealth. My experience is limited almost entirely to chlorpromazine, and I am not competent, therefore, to comment on the use of the other drugs.

I have recently started an extensive trial of chlorpromazine on the so-called "back" wards of this hospital, and our results here fully justify the statement of Dr. Morgan (page 1035) that "we stand on the threshold of a new era in the treatment of mental illness". Apart from a small but significant number of dramatic cures, the whole atmosphere in our wards has changed, and I should also like to support very strongly the other statement of Dr. Morgan's that "psychotherapy is still the basic means of treating mental illness".

In my opinion, the most remarkable effect of chlorpromazine is its ability, not only to modify and in some cases eliminate disturbing psychotic symptoms, but also to lead to a very real ability of the patient to develop empathy with relatives and ward personnel. This effect of the drug only emphasizes Dr. Hilliard's point (page 1039) that "the improvement of such a large number of patients gives rise to a problem of rehabilitation". During the last three months at least five hopelessly regressed paranoid schizophrenics of long standing have left this hospital, and it is expected that they will all once again be useful members of the community. I am sure the greatest value of these drugs is in making these patients more accessible to psychotherapy and allied procedures, and I, too, would like to join Dr. Hilliard in pleading for a steady stream of recruits into the mental health field, as without skilled psychiatrists, nurses, social workers and occupational therapists well orientated in dynamic and analytical psychiatry, we cannot hope to derive the maximum benefit from these drugs.

Our aim must be to put into practice the methods outlined by Dr. Greenblatt *et alii* (1955) in his book "From Custodial to Therapeutic Patient Care in Mental Hospitals".

Yours, etc.,

H. B. KIDD, M.B., Cert. Psych.,
R.C.P.S. (C.).

Stanley Royd Hospital,
Aberford Road,
Wakefield,
England.
August 30, 1956.

Post-Graduate Work.

THE POST-GRADUATE COMMITTEE IN MEDICINE IN THE UNIVERSITY OF SYDNEY.

Week-End Course in Rheumatic Diseases.

THE Post-Graduate Committee in Medicine in the University of Sydney announces that a week-end course in rheumatic diseases, under the supervision of Dr. Ralph Reader, will be held in the Scot Skirving Lecture Theatre, Royal Prince Alfred Hospital, Camperdown, on Saturday and

Sunday, October 20 and 21, 1956. The programme will be as follows:

Saturday, October 20: 10 a.m., case presentations, illustrating clinical features and management of: (i) "Ankylosing Spondylitis", Dr. L. J. Parr, (ii) "Gout", Dr. Brian Haynes; 11 a.m., "Current Trends in Arthritis", Dr. Selwyn Nelson; 11.30 a.m., "Modern Drug Therapy in Rheumatic Disease", Dr. John Sands; 12.15 p.m., question time; 2 p.m., "Osteoarthritis of the Hip", Dr. R. G. Robinson and Dr. R. W. McGlynn; 2.45 p.m., "Non-Articular Rheumatism", Dr. Selwyn Nelson; 3.50 p.m., "Neurological Conditions Simulating Arthritis in the Hands and Arms", Dr. J. L. Allsop; 4.20 p.m., question time.

Sunday, October 21: 10 a.m., case presentations, illustrating clinical features and management of: (i) "Frozen Shoulder", Dr. Naomi Wing, (ii) "Rheumatoid Arthritis", Dr. F. Harding Burns; 11 a.m., "Blood Disorders in Arthritis", Dr. Ralph Reader; 11.30 a.m., "Arthritis in Systemic Disease", Dr. T. M. Greenaway; 12.15 p.m., question time.

The fee for attendance is £3 3s., and those wishing to attend are requested to make written application, enclosing remittance, to the Course Secretary, Post-Graduate Committee in Medicine, 131 Macquarie Street, Sydney. Telephones: BU 4497-8.

Post-Graduate Conference at Newcastle.

The Post-Graduate Committee in Medicine in the University of Sydney, in conjunction with the Central Northern Medical Association, will hold a post-graduate conference in the New Lecture Hall, Royal Newcastle Hospital, on Saturday and Sunday, October 27 and 28, 1956. The programme will be as follows:

Saturday, October 27: 2.15 p.m., registration; 2.30 p.m., "Course and Sequelae of Infective Hepatitis: Treatment of Liver Disease", Dr. S. J. Goulston; 3.45 p.m., "Diseases of Pancreas and Liver in Children", Dr. S. E. J. Robertson.

Sunday, October 28: 10.30 a.m., "Diseases of the Pancreas and Treatment", Dr. S. J. Goulston; 11.30 a.m., "Recent Advances in Treatment of Diabetes, and New Insulins", Dr. K. S. Harrison; 2.15 p.m., "Diabetes in Children", Dr. S. E. J. Robertson; 3 p.m., "Psychosomatic Medicine", Professor W. H. Trethowan; 3.30 p.m., general discussion.

Fee for attendance at the conference will be £3 3s. Those wishing to attend are requested to notify Dr. Craig Horn, Honorary Secretary, Central Northern Medical Association, 17 Bolton Street, Newcastle. Telephone: Newcastle B 2808.

SERVICES CANTEENS TRUST FUND: POST-GRADUATE SCHOLARSHIPS.

THE trustees of the Services Canteens Trust Fund are inviting applications for two post-graduate scholarships, one for study overseas and the other for study at an Australian university. The fields of study in which the scholarships may be awarded are as follows: (a) For study overseas: (i) any course at any approved university throughout the world; (ii) aeronautics in England and America; (iii) travelling scholarship in any field; an applicant wishing to pursue any other branch of study may apply to the trustees for a scholarship in that field. (b) For study in Australia: study or research in any approved subject at any Australian university.

The scholarship for study overseas is valued at £A800 per annum. The scholarship for study in Australia is valued at £600 per annum. Both scholarships will be tenable for a period of up to three years.

The scholarship is open to a child (including stepchild, adopted child or ex-nuptial child) of a person who was at any time between September 3, 1939, and June 30, 1947: (a) a member of the naval, military or air forces of the Commonwealth; or (b) a member of any nursing service or women's service attached or auxiliary to any branch of the Defence Force of the Commonwealth; including (c) members of the canteens staff of any ship of the Royal Australian Navy, and any person duly accredited to any part of the Defence Force who served in an official capacity on full-time paid duty.

Selection will be entirely on merit and will be competitive. A scholarship will be granted only to an applicant who, in the opinion of the trustees, has outstanding ability, is of suitable character and is likely to obtain lasting benefit to himself or herself and to Australia by further study. The

scholarships will not necessarily be awarded each year. The following will be taken into consideration in determining the award of the scholarships: (i) academic career, (ii) ability for research work, (iii) character, (iv) the future value to Australia of the subject of research selected. The selection each year of the scholars to be awarded the scholarships will be made from all applications received from eligible persons by the prescribed closing dates.

Applications must be lodged with the General Secretary, Services Canteens Trust Fund, Victoria Barracks, St. Kilda Road, Melbourne, by the prescribed closing date. Applications should be transmitted through the Regional Secretary in the applicant's State. Applications for the scholarship for study overseas close on November 1, 1956. Applications for study in Australia close on January 10, 1957.

Application forms and any further information may be obtained from the General Secretary, whose address is shown above, or the Regional Secretary, Services Canteens Trust Fund, in each State. The addresses of Regional Secretaries are as follows: Victoria Barracks, Brisbane; 84 Pitt Street, Sydney; Victoria Barracks, Melbourne; 22 Grenfell Street, Adelaide; Swan Barracks, Perth; Anglesea Barracks, Hobart.

Medical Prizes.

THE EVAN JONES PRIZE.

THE Australasian Association of Psychiatrists announces that it is offering a prize, the terms and conditions of which are as follows:

1. A post-graduate prize, to be called "The Evan Jones Prize", of the value of £50, shall be awarded to the candidate who, in the opinion of the examiners, has made the most substantial contribution to knowledge in the subject of psychiatry or in a field closely related thereto.
2. The recipient must be a registered medical practitioner practising his profession in Australia or New Zealand.
3. The material submitted for the prize may be either a thesis or one or more published works in medical or scientific literature. The entry shall be suitably bound.
4. Each candidate must declare that the work described is his own.
5. Four typed or printed copies of the entry shall be submitted to the Honorary Secretary, Australasian Association of Psychiatrists, 34 Erin Street, Richmond, Melbourne, Victoria, Australia, and marked "Evan Jones Memorial Prize".
6. The prize shall be offered for competition triennially.
7. The closing date shall be September 15, 1957, for the present competition.
8. The prize shall not be awarded on any occasion unless in the opinion of the examiners the material submitted is of sufficient merit.
9. The successful contribution shall remain the property of the association.

THE E. H. MOLESWORTH PRIZE.

THE New South Wales Branch of the British Association of Dermatology will award a prize of 50 guineas for an essay, the subject being "Cutaneous Neoplasms". The conditions are as follows:

1. For the year 1956-1957 the prize will be known as the "E. H. Molesworth" Prize.
2. Entries will be received from any registered medical practitioner of Australia or New Zealand.
3. Entries will close on December 31, 1957, and the prize will be awarded to the successful essayist at the succeeding annual general meeting.
4. Essays will not be limited in length. The use of illustrations and graphs will be permitted. Where necessary, complete references should be given.
5. Work which has already been published on "Cutaneous Neoplasms" will not be accepted. No objection will be raised

if a small preliminary communication to establish priority has been accepted for publication by or has been published in a reputable medical journal.

6. Two or more examiners shall be appointed.

7. The winning essay shall become the property of the New South Wales Branch of the British Association of Dermatology, which may submit it for publication in an appropriate journal. If, in the opinion of the final adjudicator, no essay is of sufficient merit, no award shall be made.

8. Three copies of an essay shall be submitted. Essays are to be typewritten, and double-spaced lines are to be used. Each essay shall bear a motto or *nom-de-plume*, and shall be accompanied by a sealed envelope containing the author's name, address and qualifications.

9. Notification of intention to submit contributions must be forwarded to the Honorary Secretary, New South Wales Branch of the British Association of Dermatology, 217 Macquarie Street, Sydney, New South Wales, not later than September 30, 1957.

Naval, Military and Air Force.

APPOINTMENTS.

THE undermentioned appointments, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, Number 52 and 54, of September 13 and September 24, 1956.

NAVAL FORCES OF THE COMMONWEALTH.

Permanent Naval Forces of the Commonwealth (Sea-Going Forces).

Appointment.—Ian Ivor Maynard MacGregor is appointed Surgeon Lieutenant (for Short Service) (on probation), dated 9th July, 1956.

Promotion.—Surgeon Lieutenant (for Short Service) Brian Warren Curlewis is promoted to the rank of Surgeon Lieutenant-Commander (for Short Service), dated 1st August, 1956.

Citizen Naval Forces of the Commonwealth.

Royal Australian Naval Reserve.

Appointment.—Keith Robertson Daymond is appointed Surgeon Lieutenant, dated 19th March, 1956.

AUSTRALIAN MILITARY FORCES.

Australian Regular Army.

Royal Australian Army Medical Corps.

The Short Service Commission granted to 3/40123 Major (provisionally) A. P. Hanway is extended until 30th September, 1957.

The Short Service Commission granted to 1/3072 Captain (Temporary Major) F. R. Wilson is extended until 9th January, 1958.

Citizen Military Forces.

Northern Command.

Royal Australian Army Medical Corps (Medical).—The provisional appointments of the following officers are terminated: Captains 1/39085 G. C. T. Kenny, 15th June, 1956, and 1/61844 A. Davison, 30th June, 1956.

To be Captains (provisionally).—1/39085 Geoffrey Charles Treadgold Kenny, 17th June, 1956, and 1/61844 Alan Davison, 1st July, 1956.

Southern Command.

Royal Australian Army Medical Corps (Medical).—3/101028 Captain (provisionally) D. M. O'Sullivan is seconded whilst in the United States of America, 1st June, 1956. The provisional appointment of 3/87595 Captain J. G. Bunday is terminated, 4th November, 1955. To be Captain (provisionally) and Temporary Major, 29th April, 1956: 3/157159 Nicholas Talbot Hamilton (in lieu of the notification respecting this officer which appeared in Executive Minute No. 91 of 1956, promulgated in "Commonwealth Gazette", No. 40, of 1956). To be Captain (provisionally), 5th November, 1955: 3/87595 John Goode Bunday.

Central Command.

Royal Australian Army Medical Corps (Medical).—F4/1099 Captain E. M. Frost is transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (Central Command), 12th July, 1956.

Western Command.

Royal Australian Army Medical Corps (Medical).—To be Captain (provisionally), 24th August, 1956: 5/26562 Richard Francis Gorman.

Reserve Citizen Military Forces.

Royal Australian Army Medical Corps.

Eastern Command.—To be Honorary Captains, 31st July, 1956: David Oswald Crepley, Rodney Philip Shearman and George Telford Stevenson. To be Honorary Captains, 17th August, 1956: John Thomas Cantwell and Ian Macpherson Dunn.

Southern Command.—To be Honorary Captain, 16th July, 1956: Leslie Raymond Hill Drew.

Northern Command.—To be Honorary Captains, 13th August, 1956: Charles Paul Fitzgerald and Hugh Barron Fraser.

Australian Medical Board Proceedings.

QUEENSLAND.

The following Orders in Council have been promulgated in the *Queensland Government Gazette*, Number 131, of August 18, 1956:

His Excellency the Governor, with the advice of the Executive Council and in pursuance of the powers and authorities vested in him by "The Medical Acts, 1939 to 1955", doth by this order recognize the certificate L.M.S. Ceylon Medical College, Ceylon, received by Neril Emiliani

Misso from the Ceylon Medical College in the Country of Ceylon in the year 1938 as qualifying the said Neril Emiliani Misso to practise medicine in the said Country of Ceylon.

And the Honourable the Secretary for Health and Home Affairs is to give the necessary directions herein accordingly.

His Excellency the Governor, with the advice of the Executive Council and in pursuance of the powers and authorities vested in him by "The Medical Acts, 1939 to 1955", doth by this order recognize the degree of Doctor of Medicine and Surgery received by Lejba Berkowicz from the University of Milan in the Country of Italy in the year 1947 as qualifying the said Lejba Berkowicz to practise medicine in the said Country of Italy.

And the Honourable the Secretary for Health and Home Affairs is to give the necessary directions herein accordingly.

His Excellency the Governor, with the advice of the Executive Council and in pursuance of the powers and authorities vested in him by "The Medical Acts, 1939 to 1955", doth by this order recognize the degree of Doctor of Medicine received by Mieczyslaw Rog from the University of Berne in the Country of Switzerland on the sixth day of July, 1953, as qualifying the said Mieczyslaw Rog to practise medicine in the said Country of Switzerland.

And the Honourable the Secretary for Health and Home Affairs is to give the necessary directions herein accordingly.

The following has been registered, pursuant to the provisions of *The Medical Acts, 1939 to 1955*, of Queensland, as a duly qualified medical practitioner: Pratt, Hugh Bradbury, M.B., Ch.B., 1953 (Univ. New Zealand), registered under Section 19 (1) (a) and (c) of the Act.

The following additional qualifications have been registered: Hickey, William John, M.R.A.C.P., 1956; Boyce, Clive Rodney, Ch.M., 1936 (Univ. Sydney); Jameson, John Lee, D.T.M. & H., 1955 (Univ. Sydney).

The undermentioned has been registered, pursuant to the provisions of *The Medical Acts, 1939 to 1955*, of Queensland, as a specialist in the following specialty: Medicine—Hickey, William John.

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED SEPTEMBER 22, 1956.¹

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory. ²	Australian Capital Territory.	Australia. ³
Acute Rheumatism ..	2(1)	3(2)	4(1)	..	..	..	..	..	9
Amoebiasis ..	..	..	..	..	..	..	..	..	..
Ancylostomiasis ..	5(4)	..	..	..	..	..	..	..	5
Anthrax ..	..	..	..	..	..	..	..	..	..
Bilharziasis ..	..	..	..	..	..	..	..	..	..
Brucellosis ..	..	1(1)	..	..	..	..	..	..	1
Cholera ..	..	..	..	..	..	..	..	..	..
Chorea (St. Vitus) ..	..	..	..	..	..	..	..	..	..
Dengue ..	..	..	..	..	..	..	..	..	..
Diarrhoea (Infantile) ..	2(1)	12(10)	1(1)	..	..	..	..	..	15
Diphtheria ..	1(1)	2(2)	..	..	3(2)	..	..	..	6
Dysentery (Bacillary) ..	..	3(3)	..	..	..	..	..	..	3
Encephalitis ..	..	1(1)	..	1(1)	..	..	..	..	2
Filaria ..	..	..	..	..	..	..	..	..	..
Homologous Serum Jaundice ..	..	..	..	..	..	..	..	..	..
Hydatid ..	..	..	..	..	..	..	..	..	..
Infective Hepatitis ..	64(19)	36(17)	..	16(13)	1(1)	4	..	..	121
Lead Poisoning ..	..	..	..	..	..	..	..	..	..
Leprosy ..	..	..	..	..	..	..	..	..	..
Leptospirosis ..	..	2	1	..	..	..	..	..	3
Malaria ..	..	..	1(1)	..	..	..	..	..	1
Meningococcal Infection ..	4	1	..	2(1)	..	1	..	..	9
Ophthalmia ..	..	..	..	..	..	..	..	..	..
Ornithosis ..	..	..	..	..	..	..	..	..	..
Paratyphoid ..	..	..	..	..	..	..	..	..	..
Plague ..	..	..	..	..	..	..	..	..	..
Pollomyelitis ..	1	3(1)	1(1)	4	..	..	..	..	9
Puerperal Fever ..	3	..	..	..	..	..	..	..	3
Rubella ..	..	15(14)	..	6(6)	..	..	..	..	21
Salmonella Infection ..	..	..	..	..	..	..	..	..	..
Scarlet Fever ..	5(2)	10(6)	6(1)	2(2)	1(1)	..	..	..	24
Smallpox ..	..	..	..	..	..	..	..	..	..
Tetanus ..	..	..	2(1)	..	..	..	..	..	2
Trachoma ..	..	..	..	..	11(1)	..	..	..	11
Trichinosis ..	..	..	..	..	..	..	..	..	..
Tuberculosis ..	30(23)	8(6)	7(2)	6(2)	8(3)	4(1)	..	..	63
Typhoid Fever ..	..	..	..	..	..	..	..	..	..
Typhus (Flea-, Mite- and Tick-borne) ..	..	..	..	..	..	..	..	..	..
Typhus (Louse-borne) ..	..	..	..	..	..	..	..	..	..
Yellow Fever ..	..	..	..	..	..	..	..	..	..

¹ Figures in parentheses are those for the metropolitan area.² Figures not available.³ Figures incomplete owing to absence of returns from Northern Territory.

TASMANIA.

THE following have been registered, pursuant to the provisions of the *Medical Act*, 1918, of Tasmania, as duly qualified medical practitioners: Farrar, Joan Elizabeth, M.B., Ch.B., 1948 (Univ. Edinburgh), D.O. (England), 1955; Sherry, John Harold, M.R.C.S., L.R.C.P. (London), 1943, M.B., B.S., 1948 (Univ. London); O'Mara, Matthew Douglas, M.B., B.S., 1955 (Univ. Sydney).

In accordance with the provisions of Section 15 (8) of the *Medical Act*, 1955, the right to practise has been conferred by special licence issued by the Medical Council of Tasmania to the following persons (the right to practise is limited to the place respectively stated after each name): Matyssek, C., City of Launceston, Municipalities of Beaconsfield, Westbury, Longford, Evandale, St. Leonards, Lilydale and George Town; Svoboda, D., Municipalities of Penguin, Ulverstone, Burnie and Waratah.

The College of Radiologists of Australasia.

EXAMINATION RESULTS.

THE following candidates were successful in the August examinations of the College of Radiologists of Australasia, Part II, for membership of the College:

Radiodiagnosis: Dr. M. D. Begley (South Australia), Dr. W. R. C. Bennett, Dr. P. D. Breidahl and Dr. F. Schubert (Victoria).

University Intelligence.

THE UNIVERSITY OF SYDNEY.

Medical Research Fellowships.

APPLICATIONS are invited for the following medical research fellowships for the year 1957:

Reginald Maney Lake Scholarship and Amy Laura Bonamy Scholarship for pathological research work. Anderson Stuart Fellowship and Marion Clare Reddall Scholarship for research in any branch of medical science. Liston Wilson Fellowship for research in spastic paralysis or some closely allied subject. Dr. Gordon Craig Fellowship for research in urology (intending applicants are invited to discuss their applications with the professor of surgery). Sister Sanders Scholarship for part-time research work in the prevention of diseases in children. Norman Haire Fellowship for research on sex, continuing and expanding work the nature of which is already being done in the Faculty of Medicine.

Fellowships are renewable for a second and, in certain circumstances, for a third year. All fall due on January 1, 1957. All are to the value of £1252 *per annum*, except the Dr. Gordon Craig Fellowship and the Sister Sanders Scholarship, which are to be determined.

Applications for fellowships for 1957 should be made to the Registrar, and will close on November 30, 1956. The fellowships for 1957 will be awarded in December, 1956. Application forms may be obtained from the Registrar's office. Regulations in regard to these research fellowships, with the exception of the Norman Haire Fellowship, may be seen in the 1956 Calendar, pages 492-495.

Congresses.

INTERNATIONAL CONGRESS OF OTOLARYNGOLOGY.

THE sixth International Congress of Otolaryngology will be held at Washington, D.C., United States of America, from May 5 to 10, 1957. Subjects of plenary sessions will include chronic suppurative of the temporal bone, collagen diseases of the respiratory tract and papilloma of the larynx. The general secretary of the congress is Dr. Paul H. Holinger, 700 North Michigan Avenue, Chicago II, Illinois.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Dobell-Brown, Noel Glenn, M.B., B.S., 1942 (Univ. Sydney), Orange Grove Road, Cabramatta, New South Wales.

Waddell, John James, M.B., B.S., 1955 (Univ. Queensland), 333 Clarinda Street, Parkes, New South Wales.

Deaths.

THE following death has been announced:

BASSETTI.—John Angelo Bassetti, on September 28, at Sydney, New South Wales.

Diary for the Month.

- Oct. 15.—Victorian Branch, B.M.A.: Finance Subcommittee.
- Oct. 16.—New South Wales Branch, B.M.A.: Medical Politics Committee.
- Oct. 17.—Victorian Branch, B.M.A.: Clinical Meeting.
- Oct. 18.—Victorian Branch, B.M.A.: Executive of Branch Council.
- Oct. 18.—New South Wales Branch, B.M.A.: Clinical Meeting.
- Oct. 23.—New South Wales Branch, B.M.A.: Ethics Committee.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Medical Secretary, 135 Macquarie Street, Sydney): All contract practice appointments in New South Wales.

Queensland Branch (Honorary Secretary, B.M.A. House, 225 Wickham Terrace, Brisbane, B17): Bundaberg Medical Institute. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL, or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 80 Brougham Place, North Adelaide): All contract practice appointments in South Australia.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2651-2-3.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such notification is received within one month.

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